

Contract No. DACW29-01-D-0016
Delivery Order No. 0005



**U.S. Army Corps of Engineers
New Orleans District**

**HOUMA NAVIGATION CANAL DEEPENING PROJECT
TERREBONNE PARISH, LOUISIANA:
CULTURAL RESOURCES LITERATURE SEARCH,
RECORDS REVIEW AND RESEARCH DESIGN**

Final Report

March 2005

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**Prepared for:
U.S. Army Corps of Engineers,
New Orleans District
(Contract No. DACW29-01-D-0016
Delivery Order No. 0005)**

REPORT DOCUMENTATION PAGE

*Form Approved
OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)			2. REPORT DATE March 2005		3. REPORT TYPE AND DATES COVERED Final		
4. TITLE AND SUBTITLE Houma Navigation Canal Deepening Project Terrebonne Parish, Louisiana: Cultural Resources Literature Search, Records Review and Research Design			5. FUNDING NUMBERS Contract no. DACW29-01-D-0016 Delivery Order No. 0005				
6. AUTHOR(S) Joanne Ryan, Richard A. Weinstein and Charles E. Pearson							
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Coastal Environments, Inc. 1260 Main St. Baton Rouge, La 70802			8. PERFORMING ORGANIZATION REPORT NUMBER AR-549				
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Corps of Engineers, New Orleans District			10. SPONSORING / MONITORING AGENCY REPORT NUMBER Contract no. DACW29-01-D-0016 Delivery Order No. 0005				
11. SUPPLEMENTARY NOTES							
12a. DISTRIBUTION / AVAILABILITY STATEMENT Unclassified/Unlimited DISTRIBUTION STATEMENT A Approved for Public Release Distribution Unlimited				12b. DISTRIBUTION CODE			
13. ABSTRACT (Maximum 200 words) From October through December of 2003, Coastal Environments, Inc. (CEI), conducted a cultural resources literature search and records review as part of a U.S. Army Corps of Engineers (COE) New Orleans District re-evaluation study to determine if improvements to navigation along the Houma Navigation Canal, in Terrebonne Parish, Louisiana, are justified. These investigations are part of the planning to evaluate several alternatives to deepening the HNC from the authorized 15-foot depth to an 18- or 20-foot depth while maintaining the existing canal width. Both channel depths are being considered with a lock and without a lock in place. If the canal itself is assumed to be approximately 1000 ft (305 m) wide, the HNC encompassed roughly 4969.69 ac (2012.05 ha), including 2909.09 ac (1177.78 ha) of canal and 2060.60 ac (834.26 ha) of navigation channel.							
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14. SUBJECT TERMS Archaeology Historic Archaeology Houma				15. NUMBER OF PAGES 161			
				16. PRICE CODE			
17. SECURITY CLASSIFICATION OF REPORT Unclassified		18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified		19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified		20. LIMITATION OF ABSTRACT Unlimited	

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RECORDS REVIEW AND RESEARCH DESIGN**

By
Joanne Ryan
Richard A. Weinstein
and
Charles E. Pearson

Prepared For
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New Orleans District
Under Contract No. DACW29-01-D-0016
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March 2005

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20050726 142

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ACKNOWLEDGEMENTS

Mike Swanda from the New Orleans Corps of Engineers (MHPO) was of great assistance during the course of this project by answering questions, loaning out sources and providing digital map data.

The archaeological reconnaissance survey was conducted by Richard A. Weinstein, and Joanne Ryan. Richard Weinstein and Charles E. Pearson have conducted much of the previous research in the project region and generously provided their input and editing skills. Mark Forsyth produced the large-scale maps, and Cherie Schwab was responsible for report layout and production.

Special thanks are extended to the numerous anonymous individuals of Terrebonne Parish who continually came to our aid with their superior knowledge of this unique region and the skills required to navigate in it. One gentleman at the Red Carpet Inn in Houma told us where to launch on Bayou Black, another helped us push our boat and trailer around on LA 57 at the 18-wheeler wreck, and told us where to launch at Dulac, and a third at T-Irv's spliced our winch cable. Sincere thanks also to the men on the Shell, Inc., crew boat that tried to fix our motor, the gentleman cleaning fish at the Cocodrie Inn who did fix our motor, and especially J.B. who let us finish our survey in his boat and then towed us back to Dulac.

CHAPTER 1

INTRODUCTION

This report presents the results of a cultural resource literature and records review undertaken as part of a U.S. Army Corps of Engineers (COE) New Orleans District re-evaluation study to determine if improvements to navigation along the Houma Navigation Canal are justified. These investigations are part of the planning now underway to evaluate several alternatives to deepening the HNC from the authorized 15-foot depth to an 18- to 20-foot depth while maintaining the existing canal width. Both channel depths are being considered with and without a lock in place.

The COE is obligated under the National Historic Preservation Act (NHPA) of 1966 (particularly 36 CFR 800, the regulations governing Section 106), and the National Environmental Policy Act (NEPA) to take into account the effect its undertakings have upon cultural resources within a given project area. Under these laws and regulations, the COE assumes responsibility for the identification and evaluation of all cultural resources within the project boundaries.

The Houma Navigation Canal (HNC) is a Federally maintained waterway beginning at the Gulf Intracoastal Waterway at Houma, Louisiana and ending about 41 mi (65.96 km) south of Houma at the minus-18-foot contour in the Gulf of Mexico navigation channel at Cat Island Pass (Figure 1-1).

Construction of the HNC began in 1958, and the official opening was in June 1962. The proposed project area contains approximately 24 mi (38.61 km) of canal and 17 mi (27.35 km) of navigation channel. This cultural resources investigation evaluates and assesses the potential for cultural resources in the proposed project area, which includes new and existing upland disposal areas, submerged disposal areas, earthen dike and access road locations, marsh restoration areas, and rock retention structures and foreshore protection dikes along the canal. If the canal itself is assumed to be approximately 1000 ft (305 m) wide, the HNC encompassed roughly 4969.69 ac (2012.05 ha), including 2909.09 ac (1177.78 ha) of canal and 2060.60 ac (834.26 ha) of navigation channel.

The HNC serves as a navigation route connecting the Gulf of Mexico with the interior of the central coast of Louisiana. It cuts through several natural waterways including Bayous Black, La Carpe, du Large, Petit and Grand Caillou, Sale, and Little Cocodrie Bayou, most of which empty into Terrebonne Bay. All these bayous were regionally important water routes leading inland from the Gulf through the prehistoric and historic periods. Thus the probability for finding archaeological sites, historic standing structures, and shipwrecks along their banks is considered high. Several archaeological and shipwreck sites are known to exist in the general project area, and unreported sites likely exist.

Houma Navigation Canal Deepening Project

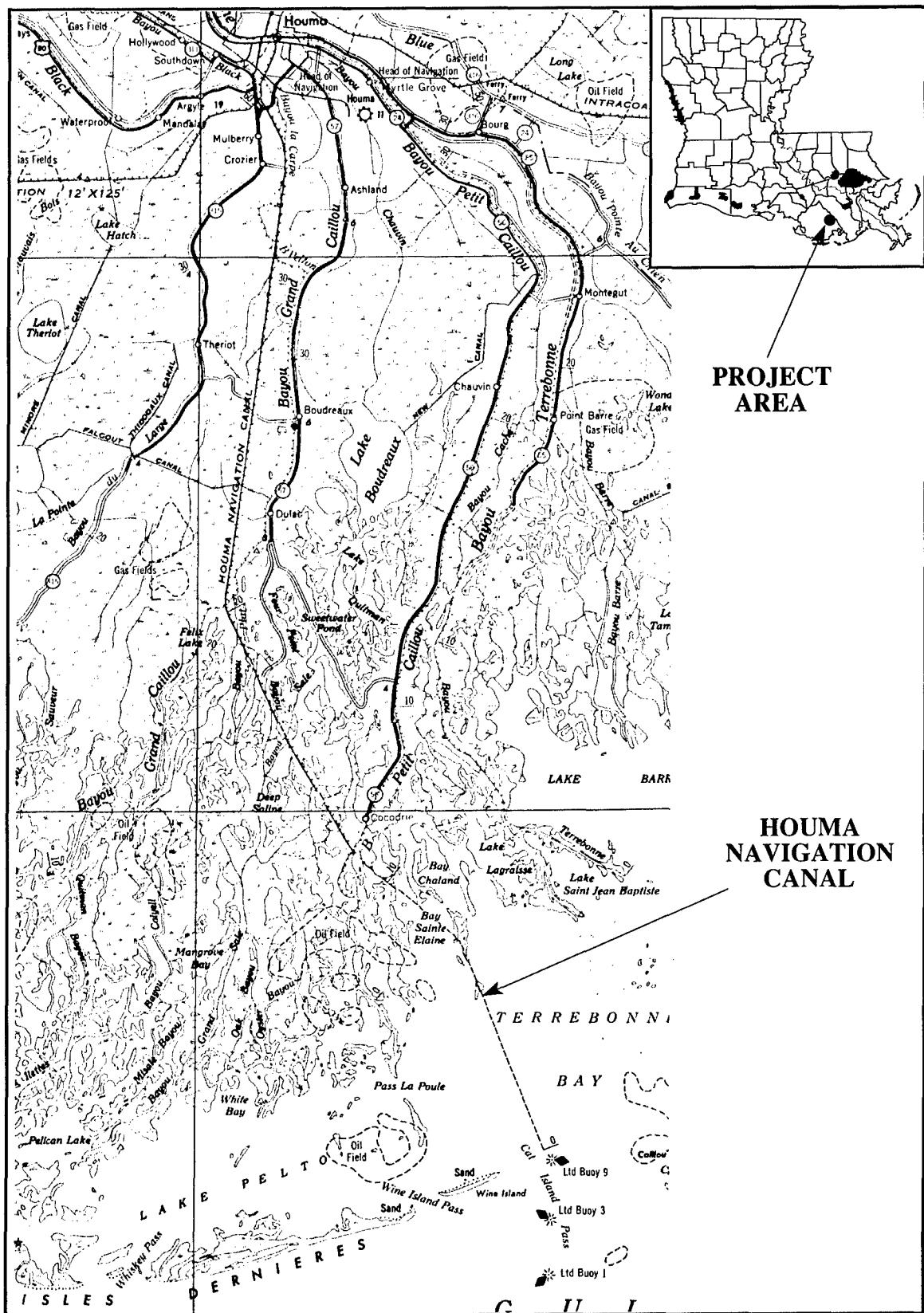


Figure 1-1. The location of the Houma Navigation Canal project area.

The data developed in this study provide the New Orleans District with knowledge of the cultural resources potential of the project area. In addition, it is hoped that the information provided here will serve as a contribution to the broader area of the District's overall management of cultural resources. This study also provides a contribution to the body of literature dealing with the history and prehistory of Terrebonne Parish and the Louisiana Gulf coast. So little comprehensive survey has been conducted in the region that all new data collected will inevitably be of great value. Unfortunately, the sites that can provide this data are disappearing at an alarming rate, given the degree of land loss in the region over the last

50 years. If the information is not garnered now, it might never be.

This report is organized as follows. Chapter 2 discusses the geological setting of the project area, while Chapter 3 details the previous archaeological investigations conducted there in the nineteenth and twentieth centuries. A brief summary of aboriginal occupation along the HNC is presented in Chapter 4, and subsequent historic occupation in Chapter 5. Chapter 6 presents the results of a cultural resources records review and a reconnaissance inspection conducted of the project area. All of this preceding data were then used to produce a research design for the proposed project area that is presented in Chapter 7.

CHAPTER 2

ENVIRONMENTAL SETTING

The study area lies within the Mississippi River deltaic plain of south central Louisiana. The delta plain includes the lower portion of the present Mississippi River, its present delta, and areas occupied by former deltaic systems of the river. This is an area characterized by both fluvial and deltaic features, such as natural levees; abandoned and relict distributaries; interdistributary basins, vast areas of saline, brackish and fresh marshes; large saline and brackish bays; and coastal lakes, beach ridges and barrier islands. The primary streams in the project vicinity include Bayou Black, Bayou La Carpe, Bayou du Large, Bayous Petit and Grand Caillou, Bayou Sale, Little Cocodrie Bayou, and Bayou Terrebonne. The six latter watercourses empty into Terrebonne Bay. The dynamic nature of this deltaic environment placed considerable constraints on the timing, distribution, and functional nature of human habitation. The following discussion focuses on those aspects of the environment most critical to understanding human adaptation to the area over time.

Geology

The Mississippi River delta plain is a massive wedge of alluvial and deltaic sediments extending for almost 320 km miles along the coast of Louisiana and over 100 km inland. Its geologic history is related to a sequence of episodes of delta building and deterioration resulting from the progradation and

subsequent abandonment of the present and former Mississippi River courses and deltas over the past 9,000 years or so. Thus, the Mississippi delta plain is a composite geomorphic feature consisting of numerous coalesced delta complexes which themselves are composed of numerous smaller units, commonly referred to as delta lobes. The surface morphology of each delta plain and lobe is similar, consisting of a network of distributaries that radiate out from an abandoned or active trunk channel and are separated by interdistributary troughs consisting of vast areas of marsh, swamp, ponds and lakes.

Between about 9,000 years ago and the present, the Mississippi River built several delta complexes, each consisting of several delta lobes. The delta complexes represent major shifts in the course of the Mississippi River. Drawing from Frazier's (1967) earlier work, and relying on recent archaeological data, Weinstein and Gagliano (1985:Fig. 1) have identified the following major delta complexes from oldest to youngest: Maringouin, Teche, Metairie, LaLoutre (St. Bernard), Lafourche-Terrebonne, Plaquemines and Belize, the modern delta complex (Figure 2-1).

The advance or retreat of shorelines is caused by the change in balance between rates of sediment deposition and effects of subsidence and erosion by the sea. Deltas and shorelines advance at the mouths

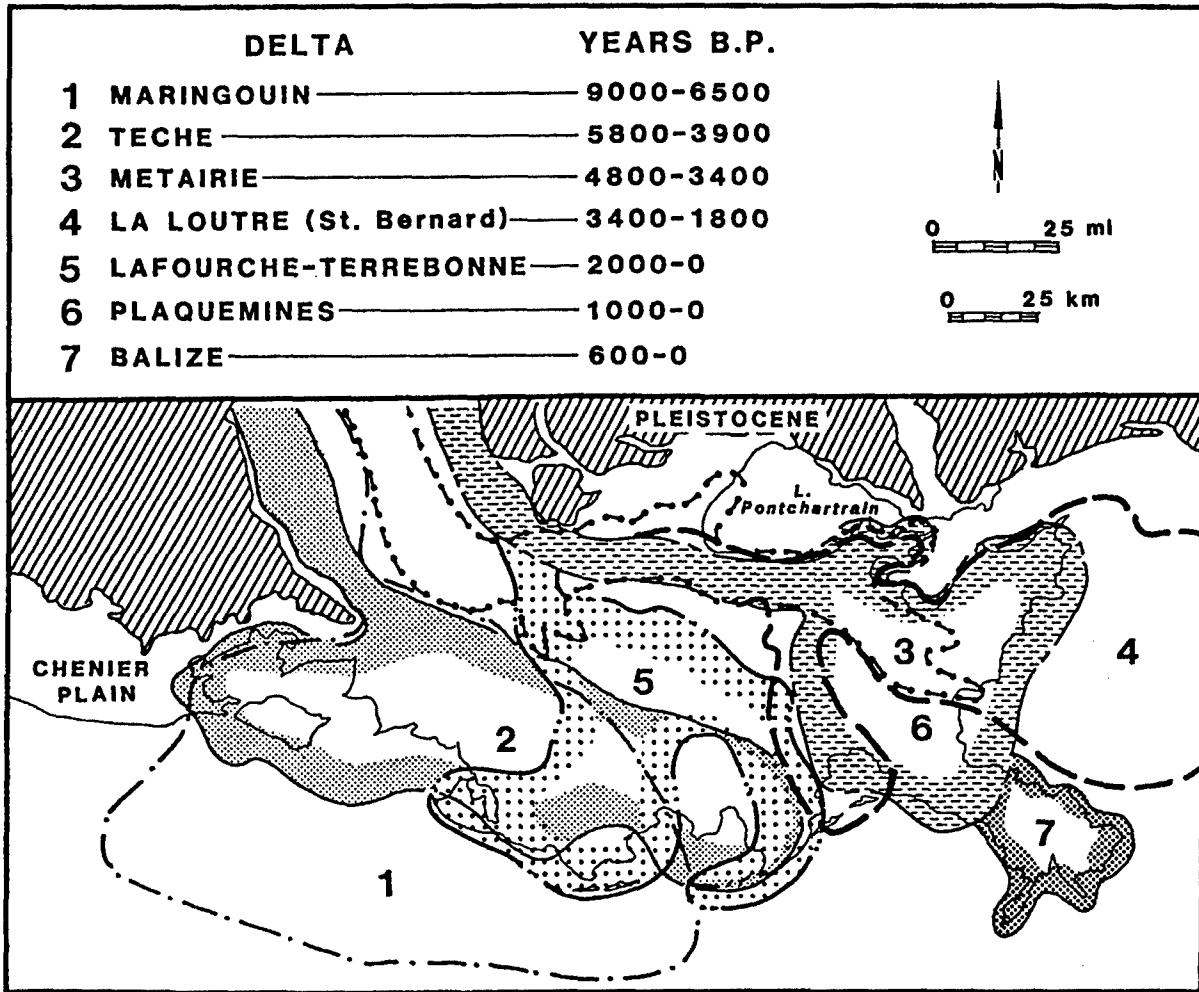


Figure 2-1. Mississippi River deltaic complexes (Weinstein and Gagliano 1985:Fig. 1).

of active streams that transport sediments seaward. Erosion occurs near the mouths of inactive streams that cannot transport sufficient sediment to sustain their position (Gagliano et al. 1975:9-15). Barrier islands are formed along delta margins as a delta lobe goes through deterioration after abandonment. As a delta lobe is abandoned and the deltaic surface begins to submerge through subsidence, the sand deposits that had been distributed along the delta margin often remain as a series of barrier beaches or barrier islands, separated from the retreating delta shoreline by a shallow bay or estuary (Williams et al. 1992). With continued subsidence, the barrier sediments become subject to redistribution, characterized by an inland migration of the island coupled with loss of sediment and a decrease in the size of individual islands.

The Houma Navigation Canal project area is associated with the abandoned Lafourche-Terrebonne

delta complex (see Figure 2-1) and the barrier systems of the Timbalier Islands and the Isles Dernieres represent the islands formed as the delta complex has retreated. The most recent geological evidence indicates that Lafourche-Terrebonne delta complex began as a distributary (present day Bayou Lafourche) off the main trunk of the Mississippi River approximately 1500 years ago (Tornquist et al. 1996). This date is later than that proposed by earlier geological studies, but is in line with currently available archaeological data from the Lafourche-Terrebonne region (Pearson and Davis 1995; Weinstein and Kelley 1992). Possibly after only 500 years or so of progradation, flow into the Lafourche-Terrebonne system from the main trunk of the Mississippi River began to decrease and, soon, the system began to deteriorate. Bayous Petit Caillou and Terrebonne, which empty into Terrebonne Bay, constitute two now-relict channels that were components the Lafourche-Terrebonne system. As the margins of

the delta began to erode back, barrier islands were formed. The Timbalier Islands were created over only the last 300 years as erosion from the Caminada-Moreau Headland at the mouth of Bayou Lafourche supplied sand for barrier development. Landforms developed into continuous duned terraces and spits on the downdrift ends of the islands. The Timbalier Islands are, therefore, "laterally-migrating, flanking barrier islands built by recurved spit processes" (Williams et al. 1992:4). The Isles Dernieres are older and were formed by the erosion of the Bayou Petit Caillou headland and beach ridges over the last 600 to 800 years (Williams et al. 1992:4).

In a survey report examining Bayou Terrebonne in 1880, it was noted that the mouth of Bayou Petit Caillou had previously been at Caillou Island, well seaward of the mouth at that time. It was noted that in 1850 the bayou ran between narrow strips of sea marsh between Timbalier Bay and Terrebonne Bay. By the time of the survey in 1880, this area of marsh had broken up into isolated grass islands by the action of waves (Annual Report of the Chief of Engineers [hereafter cited ARCE] 1880:1180). Trips from Montegut to Caillou Island by land were common at one time and there was a lighthouse and even a hotel on the island (Guidry 1985:37). However, the processes of subsidence and erosion are continuing and more and more fast lands are being eroded and the form and content of the barrier islands are constantly changing as well as being removed. This trend of beach erosion along the barrier islands in Terrebonne and Lafourche parishes has been recorded in a comparative study by Williams et al. (1992). For example, Wine Island, extant in 1887, is now almost completely gone. Its remnants are primarily exposed during periods of low water. The Wine Island entrance pass was situated slightly east of where Cat Island Pass is today. Cat Island Pass is a shallow water pass extending between the Timbalier Islands and what remains of Wine Island, historically part of the Isles Dernieres (Last Islands). Both passes connected the Gulf with the western end of Terrebonne Bay.

Geomorphology

The landforms located at or near the surface within the study area have been formed by deltaic activity within the past 9,000 years (Fisk 1952; Frazier 1967). The earliest episode of delta building occurred between about 9000 and 6500 years ago when sea level was 40 to 60 ft below its present elevation. This delta, known as the Maringouin, once

extended 40 to 50 mi beyond the present shoreline, but with subsequent sea level rise it was transgressed and gradually eroded back (see Figure 2-1). Much of the onshore remnant of the Maringouin Delta is now deeply buried beneath later deltaic deposits; however, Weinstein and Gagliano (1985:122) have suggested that a relict beach ridge partially exposed west of Lake Penchant may represent a reworked portion of the early delta. Other researchers have argued that this feature is associated with the next stage of delta building and is therefore substantially younger (Smith et al. 1986:64).

By about 5800 years ago sea level had risen to approximately its present level, and the Mississippi began prograding a new delta, known as the Teche, into the shallow Gulf. The trunk channel of this system has been reoccupied by bayous Teche, Boeuf, L'Ourse, and Black. Its natural levees, composed of grayish brown silts and silty clays, have subsided somewhat, but are still extant as surface exposures approximately half a mile to one mile wide.

While the age and content of the Teche Delta are known in general terms, questions remain concerning the period during which it was active within the present study area and the location of its eastern limits. Smith et al. (1986:61-62) suggest that deposition in the Terrebonne marsh area occurred between 4500 and 3500 years ago, and that the easternmost deposits are found in the vicinity of Houma. Weinstein and Gagliano (1985:123) argue for a somewhat earlier period of activity, 5800 to 3900 B.P., and, following previous researchers such as Russell (1940:1203) and Fisk (1944), place the eastern margin of the Teche Delta approximately 30 mi east of Houma. They identify several southwest trending distributaries including Bayou du Large, Bayou Mauvais Bois and Small Bayou La Point, as having been initially formed by the Teche Delta. Smith and his co-authors (1986:64-67) assign these to a later episode of delta building.

About 4800 years ago the Mississippi River began shifting out of the Teche course and creating a new delta in the area of present-day New Orleans. Variously known as the Cocodrie (Fisk 1944), Metairie (Weinstein and Gagliano 1985), or an early stage of the St. Bernard Delta (Frazier 1967), it initially received only partial flow as a portion of the Mississippi's discharge continued down the Teche, building new distributaries now occupied by bayous Sale and Cypremort. As the Mississippi's flow gradually shifted to the east, the Red River, which

had intersected the Mississippi south of the Marksville Prairie, occupied the old Teche course and discharged directly into the Gulf through its distributaries. Several authors have commented on the narrow and relatively steep Red River natural levees which may be seen within the broad, gray levees of the Teche-Mississippi (Landreth in Newton 1985:111; Russell 1940:1205).

The duration of the Red's occupation of the Teche course is not well established at present. Russ (1975:163-166) suggests that the Red followed the Teche course only a short time after the Mississippi abandoned it. He argues that the Red then shifted into a new meander belt, occupied it for a time, and then abandoned it in favor of the Teche course once again. Unfortunately, Russ has no absolute dates for any of these events. Archaeological data from two widely separated localities bear on this problem. One of the localities is the Gibson site (16TR5), located west of the present study area. McIntire (1958:63-64) took several cores from the site and encountered a Marksville-age shell midden intermixed with reddish silts that he interpreted as Red River deposits. Based on these findings, McIntire suggested that the Red was still occupying the Teche course at the time that the midden was deposited (ca. A.D. 1 to 400). The other piece of archaeological evidence comes from the modern Red River meander belt through Moncla Gap. Previous researchers have generally placed the age of this meander belt at less than 1,000 years (Fisk 1944; Saucier 1974:Fig. 3), but Pearson (1986) has recently noted that the apparent association of several early Marksville sites with this feature argues for a considerably earlier date of establishment, on the order of A.D. 1 to 200. Thus two sets of archaeological data suggest that the Red River abandoned the Teche course about 1800 to 1900 years ago.

While the Red River continued to occupy the Teche course, the Mississippi began diverting out of the St. Bernard Delta and gradually shifted its flow down Bayou Lafourche. The Lafourche system reached its peak flow about 2000 years ago, creating new delta lobes east of the present study area and reoccupying old Teche distributaries such as Bayou Black and Bayou L'Ourse.

About 1000 years ago the Mississippi River again began shifting its course to the eastern portion of the deltaic plain and building the Plaquemines Delta. A small amount of flow continued down the Lafourche

system, but this was probably not responsible for any significant land formation within the present study area. This diminished flow continued until 1904 when the source of Bayou Lafourche was artificially closed. After about 1000 B.P. subsidence and marine transgression became the dominant processes at work within the Terrebonne marsh. Only within the last 50 years, since the Mississippi's diversion of a portion of its flow down the Atchafalaya River, has sedimentation begun to occur to the west of the study area.

Depositional Environments

The complex geomorphic history of the study area has resulted in an intricate and constantly changing mosaic of environmental zones. Recent human activities have, in some cases, dramatically altered the condition of these environmental zones (e.g. the clearing of forests from natural levees), and in other cases they have accelerated the change from one environmental type to another (e.g. the shift from fresh to brackish marsh). The study of depositional environments has proven an effective method of reconstructing environmental zones of the past. Depositional environments can generally be identified from maps or remote imagery, and a recent study (Smith et al. 1986) has delineated those at or near the surface within the present area. Depositional environments also often have distinctive lithological characteristics that can be identified in subsurface borings and excavations. These environments can likewise be dated by a variety of relative and absolute dating techniques.

One group of depositional environments found within the present study area consists of a series of fluvial features which include natural levees, point bars, abandoned channels, abandoned courses, and distributary channels (Smith et al. 1986:10-16). Natural levees are ridges formed through vertical accretion as a result of overbank flooding along a stream. They parallel the channel and slope away from it. The natural levees presently exposed within the study area vary from over 1 mi wide along the trunk channel of the Teche-Mississippi course to only a few feet wide along some of the smaller distributaries. Their crests range in elevation from 10 ft to approximately sea level. Natural levees are presently exposed in parts of the study area, but they also occur in the shallow subsurface, having been buried by subsidence beneath more recent swamp and marsh deposits.

Point bars are lateral accretion deposits that form on the inside bank of meandering streams. They exhibit a fining upward sequence of grain sizes and a characteristic ridge-and-swale topography. Point-bar deposits are limited to the trunk channel of the Teche-Mississippi system, and are therefore a minor depositional environment in the present study area.

Abandoned channels and abandoned courses are both relict stream channels. Smith et al. (1986:11-13) distinguish between the two primarily on the basis of length and the fact that a course is abandoned in favor of a new meander belt. In this study the two are combined and referred to as abandoned channels. Although abandoned by the river, these channels are often reoccupied by smaller streams and may continue to contain open water for a considerable period of time. They gradually fill with fine-grained deposits interbedded with organics.

Distributary channels are simply small stream channels that diverge from the trunk channel of a deltaic system. Like the larger channels of the delta, they have associated natural levees, but these have often subsided completely beneath the marsh.

Other depositional environments found within the study area include inland swamps, marshes, lakes, and interdistributary bays. Inland swamps are poorly drained areas bordered by natural levees that support swamp-forest communities. Presently they are limited to the northern and western portions of the study area, but their distribution has changed over time with the expansion and deterioration of the delta lobes.

Marshes make up the majority of the land presently exposed within the study area. They support vegetation composed predominantly of grasses and range in salinity from fresh to brackish to saline. The three marsh types vary in elevation, ratio of organics to inorganics, and associated plant species, and can sometimes be distinguished in the subsurface through a combination of sedimentological and botanical analyses. They are presently distributed in a series of roughly east-west trending bands across

the study area, but, like the inland swamps, their distribution has changed considerably through time.

The final depositional environments present are lakes and interdistributary bays— bodies of open water that may form during progradation of a delta or after it has begun to deteriorate. They often differ in salinity, but both fill with fine-grained deposits.

Modern Setting

The present conditions affecting the study area are an ongoing part of the evolution of the Lafourche-Terrebonne delta system. The bayous running through the project area were used historically to connect the inland port community of Houma and other smaller communities, plantations and farms with the Gulf. While these bayous continue to be used by recreational and some commercial traffic (primarily shrimp and fishing boats), much of the commercial traffic now travels along several navigation canals constructed in this century.

Louisiana now leads the nation in the loss of its wetlands and in coastal erosion. Erosion of its barrier islands, in places, exceeds 20 meters per year. The state's barrier islands have decreased by more than 40 per cent on the average and some islands have lost 75 per cent of their areas within the past 100 years. As the barrier islands dissipate, so does the protection from erosion they provide to inland wetlands. The Isles Dernieres, for example, have the highest rate of coastal erosion in the state. Between 1890 and 1988 most of the central arc of Whiskey Island had eroded, as well as a large portion of Wine Island (Williams et al. 1992:2). This trend of land loss is expected to continue for years to come. The physical processes that cause the erosion are complex, and there is much debate and controversy within the technical and academic community over which cause is the most significant and which measures would alleviate coastal land loss (Williams et al. 1992:1). Most agree that the erosion is both natural and human induced, and greatly affects the movement of sediments that both bury and expose cultural resources.

CHAPTER 3

PREVIOUS INVESTIGATIONS

This section will provide data on previous investigations pertinent to the archeology of the area, particularly the lower Atchafalaya Basin and adjacent marshes. As much of this information has been presented previously (Brown et al. 1997, 2000; Gibson 1979; Goodwin et al. 1985a; Neuman 1977, 1984; Weinstein 1994; Weinstein et al. 1978; Weinstein and Kelley 1992), only a brief synopsis is provided.

Nineteenth Century

The earliest reference to potential archeological sites located in the project vicinity, is the term "Temple" shown on a map entitled *Carte Generale du Territoire d'Orleans* by Barthelemy Lafon and dated 1806. This temple presumably represents a prominent Indian mound and is located at what is apparently the southeastern end of Lake Palourde north of Morgan City. However, the geography of the region is somewhat confused, making an absolute location difficult to discern. If the temple is in the position suggested, then it likely refers to the Lake Palourde site (16AS14), reportedly a large shell midden situated at the junction of the lake and bayous Boeuf and L'Ourse.

The next set of references to sites in the region comes from James Leander Cathcart and John Landreth, commissioned by the U.S. Navy in November, 1818, as agent and surveyor, respectively,

to locate stands of live oak and red cedar trees for construction of naval vessels (Prichard et al. 1945:735-736). Along with fellow agent James Hutton, and a crew of seven men, Cathcart and Landreth spent approximately three months (January through March 1819) travelling throughout the Atchafalaya Basin, up and down Bayou Teche, and along the Louisiana coast between Belle Isle and Bayou Petit Caillou. Both men left journals of their expedition. Cathcart's was edited and published in 1945 by Walter Prichard, Fred B. Kniffen, and Clair A. Brown (Prichard et al. 1945). Landreth's account has been presented twice within recent years; first by Dennis A. Gibson in a series of five installments in the *Attakapas Gazette* single volume (Newton 1985). Cathcart was the apparent leader of the party and it is interesting to note that he used Lafon's earlier map as a guide (Prichard et al. 1945:760).

On January 23, 1819, the expedition reached the southeastern corner of Lake Palourde, the junction of the lake, Bayou Boeuf and Bayou L'Ourse (Prichard et al. 1945:788-90). That portion of Bayou Boeuf which runs roughly north-south (connecting Lake Palourde and the present-day Gulf Intracoastal Waterway) was then referred to as "La Coup." It was near the entrance to La Coup that Cathcart first detailed an Indian site within the general study area. This site, today known as the La Coup site (16SMY146), is located on the extreme northeast-

ern edge of Tiger Island and immediately across Bayou Boeuf from the Lake Palourde site (16AS14). Cathcart described it as follows:

At the mouth of LaCoup, the land tends N by E along Lafourche Island; Tiger Island, and Lafourche Island points, bear N and S of each other. The West side of Tiger Island ranges SW 1/2 S, to West about 5 miles; in this bearing LaCoup is bounded by Tiger Island on the South and Lafourche Island on the North; We landed at a white mans house on Tiger Island where LaCoup is from 80 to 100 yards wide, there is likewise a house on Lafourche Isle opposite to it, own'd by one Garrett Taylor from Ouachita - Pierre Moreaux at whose house we landed is a sailor, a native of old France, & is about 60 years old, his wife is a native of Bedford County Pennsylvania, about 33 & has two children the youngest a fine fat boy of a year old, their house is fix'd on a hill of clam shells, which bounds an Indian burial ground, from whence they frequently dig human bones, once they found a whole skeleton; behind the hill is a piece of good alluvial land; as low as the surface of the water, the soil appears rich & produces red maize, cabbage, garlic, beans, & sweet potatoes - they have some poultry, & what I thought a curiosity, their dog which was very tame, eat corn with them in perfect harmony, picking the grain from the Cob with his teeth, & generously permitting an old hen to pick up all that fell on the ground . . . [Prichard et al. 1945:789-790].

Landreth's description of the locale is almost identical:

. . . here on Tiger Island near the mouth of the coup or cut is a small settlement in possession of Peter Muro a Frenchman formerly a sailor is about sixty years of age. has a wife about thirty years of age and two children a Boy and Girl quite small the wife a native of Pennsylvania her maiden name Donnelly they have lived here some years and from account enjoyed good health Muro has in cultivation about six acres which supplies the family with Bread and wholesome Roots and plenty of garden vegetables the old man appears to be industrious he has got some Peach Trees Planted which appears very thriving he was this Day planting sweet Potatoes his Peas was about fit to . . . Blossom his onions and garlic 6 inches high everything looked in a very growing way. their House or rather

miserable Hut stands on the Top of a high bank of Shells near the side of the cut the Lands as they extend back from the cut fls very low but are a rich black Soil and very productive. here we got a supply of fresh water tolerably good [Newton 1985:63].

Leaving the Moreaux family, Cathcart and party descended Bayou Boeuf and casually mentioned "several plantations tolerably well fenced" (Prichard et al. 1945:790) situated along its banks. One structure situated along the "last reach" of La Coup was "a good plaster'd house, full as good as any of the houses at Franklin, with several outhouses, which make a neat and comfortable appearance . . ." (Prichard et al. 1945:790). This may have been a forerunner of the Hard Times Plantation (or Thibodaux) house (16AS34), reportedly built in 1832 by George Schwing who had previously settled along Bayou Boeuf (Stahls 1976:82-83; Weinstein et al. 1978:31-33).

Turning west with Bayou Boeuf near the present location of Amelia, the Cathcart expedition proceeded west toward Berwick Bay. After crossing the bay, the party stopped at Berwick Plantation where today the town of Berwick is situated. It is there that both Cathcart and Landreth describe what certainly must have been an impressive array of Indian mounds and shell middens.

Cathcart records the mounds and middens in unusually fine detail:

On Mr. Berwicks place are four Indian Mounds, which are a natural curiosity, the origin of which is veil'd by the lapse of time, they are situated at right angles, pointing to four Cardinal points, including a square of about an Acre, in which about 30 years ago, there were several strata of ashes very visible, supposed to have accumulated from the council fires of the aborigines . . .

The bank of the river behind which these mounds are situated, is ten feet high, composed of Clam shells, on the fish which, it is supposed they fed - The two which point on the bay, are about 250 yards apart - the Southernmost, which is the highest, is about 30 feet above the surface of its base, which is level with the water, its parallel companion, is not so large, but they are all of the same figure, which is the frustum of a Pyramid, of 60 yards, each side at the base de-

creasing, until at the summit, they are not more than 30, forming an ascent rather difficult . . .

On the North sides of the two Southern, & south sides of the Northern ones are gangways form'd by which to ascent; at the base of the southwestern mound, is a large pool of water, & on the top of the Northeasternmost is a large heap of ashes, which have been dug into, a small distance, but no discovery has been made, it is supposed to be the Altar on which they offer'd up sacrifice, where even human victims may have been immolated at the shrine of the offended Deity of the waters . . .

It is conjectured that these mounds were erected at some remote period as a place of retreat from the inundation of the Mississippi; this may have been the case, combined with a place of defense when attack'd by superior numbers, it is likewise probable that the waters might have risen far above their expectation, & overwhelm'd them at their last reterat, & not even left a vestage of their existence; or that the lapse of time has been so great, since they were erected that it has buried the tradition with its depositories in the gulf of oblivion . . .

To reconcile these opinions, it is necessary to examine the interior of the mounds, in which with the exception of a small space on the Northeastern Altar, & on the Southeastern, where Mr. Berwick's mother is inter'd, they have remain'd undisturbed for ages; were it not for their great magnitude, they might be supposed to be the repository of the bones of innumerable bodies of Indians, who died in battle, or by pestilence, & annually accumulated by natural deaths, which at different periods have been cover'd with Stratas of earth, but their vast size & regular form, is opposed to this opinion, we must therefore remain in comparative ignorance, until this curious work of the Sons of forest, is explored to its base . . .

It is worthy of remark, that many human bones have been dug up, on Mr. Berwick's plantation, in the vicinity of the mounds, while they have remained undisturb'd . . . [Prichard et al. 1945:793-795].

The fact that Cathcart was able to observe the "gangways" and "pool" (borrow pit) attests to the fine state of preservation of the mounds in 1819.

Landreth provides a somewhat different description:

. . . now in Berwicks Bay we steer West Northwest three quarters of a mile to a settlement owned by a Mr. Berwick from whose Ancestors Berwicks Bay took its name here at Mr. Berwicks we went on shore and examined some Indian Mounds as they are called. there is four of these mounds in number which are evidently works of art and apparently much labour has been spent upon them the four forms nearly a square :: at about the distance of sixty yards apart. there being no record or tradition of the Origin or cause of the raising of these mounds the mind is left to conjecture. when how and for what purpose they originally were raised. the Lands on which these mounds stands are very low and being all alluvion were no doubt much lower formerly than they are at present and more subject to inundations these mounds might therefore be raised as places of retreat during the overflowing of the waters they have also the appearance of places of security in time of war. the most [illegible] of which Mr. Berwick has converted into a Burying ground and has their laid his mother the figure of this mound appears to be a perfect cone and perpendicular height about one hundred feet. the top or smaller diameter being about one hundred and twenty feet. we staid but a short time on shore got some organges of Mr. Berwick and soon went on board of our Boat again and stood up the Atchafalaya or Berwicks Bay North North West two miles to the mouth of the Teche . . . [Newton 1985:66]

In an earlier study, Weinstein et al. (1978) suggested that these mounds were equivalent to at least one which used to stand on Fairview Plantation property slightly to the north of present-day Berwick. It now appears that this suggestion was in error, and that the mound on Fairview Plantation and those on Berwick's place were two separate sites.

After exploring the environs around Berwick Bay, Cathcart and company headed south down the Atchafalaya River. After passing the southern end of Bayou Shaffer, Cathcart reported the following:

Steer'd SSW 1/2, WSW 1, SSW 1 mile to Meridian, bent a fishing line on to lead line, & got bottom in 8 fathoms, S by E to S 1/2 E 2 miles to shell Island . . . on which is a clump of live oak, of a low shrubby groth, which is the first we have seen since the marsh commenced,

at 1 1/2 PM it bore WSW & may be known by a white shelly or sandy beach . . . [Prichard et al. 1945:798].

This same location was recorded by Landreth in the following manner:

. . . this two miles brings us to a Small Island on our right containing about two acres of Land apparently made up of a mass of Shells mixed with a little Earth covered with a handsome growth of small young Live Oak; this place we call Shell Island; which has a very handsome appearance being pretty high and a handsome shell beach on one side washed by the Broad deep waters of the Atchafalaya and rising like an artificial mound out of the Low Surrounding marsh who's summit is adorned with beautiful Live Oak and it margin generally covered with aquatic Fowls [Newton 1985:75].

This "Shell Island" is today known as Shell Island Point and is the locus of a large prehistoric shell midden (16SMY25) of the same name. Leaving Shell Island Point, Cathcart and his party headed towards Deer Island, in the center of which was a large, prominent stand of oaks growing on a shell ridge (Prichard et al. 1945:798-799; Newton 1985:75-76). Today known as the Deer Island site (16TR88/103), Cathcart (Prichard et al. 1945:798-799) described it as follows:

. . . from Shell Island [Shell Island Point, 16 SMY 25] to the point, which we must pass (SW point of the marsh) to go to Deer Island, on which were a prodigious number of Pelicans, is S by W dist. 3 miles: At 2PM, the wind was WSW right in from the Gulf which made a considerable swell; the first points (Deer & Presidents points) . . . going out of the Atchafalaia bears W by N & E by S of each other dist'ce 3 Miles, at the mouth of the river close along shore there is from 3 to 4 feet water; we kept along the point SE 1/2S & bore away into Deer creek [Round Bayou on modern maps], . . . which divides Deer from Plumb Islands NE by N; it is bounded by grassy marsh on both sides, a crooked Bayou runs through it, about 100 yards from the 1st point, which we did not enter, supposing there was not water in it for our boat; the course kept winding from NE by N to North 1 1/4 miles enter'd another creek [Deer Island Pass] N'th 50 yards & then another [a ditch, according to Landreth], just the breadth of the boat, which runs W by S

250 yards where we landed on the Cane marsh close to the shore; the soil was rich alluvion, full of Deer tracks, much rooted up by them & Racoons; here an Owl was shot, who hail'd us on our arrival, although it was daylight, this I must allow was ungrateful, but I have received returns for favours confer'd; sentimentally as bad as death! from the Lords of the creation Man! & I had no agency in the murder of this emblem of wisdom, & would much rather it had lived-

We found a ridge of live oak on this Island 100 yards wide, & more . . . than half a mile long, which contained about 100 trees, a few of which were 3 to 5 feet diam'r, but the Island is entirely surrounded by marsh, which would render the transportation of timber very difficult & expensive, even if a sufficient quantity existed to render it an object worthy of attention of government. On this Island no mark of the axe appears, it is in a perfect state of nature, its groth is wild cherry (*Cerasus virginiana*) . . . honey locust (*Gleditchia triacanthos*) maple (*acer rubrum*) & live oak underwood, Canes, Briars, vines and small shrubs; common to all the Islands which we have visited, & which is already described; we likewise found wild onions or shallots, . . . which has just commenced vegetation, & had not yet form'd bulbs, of which we pick'd a quantity an excellent anti-scorbutic, & no bad auxiliary to salt beef and biscuit-

Deeming the groth of this Island of little importance for naval purposes, [this conflicts with Landreth's account, see below], we ran out into the bay . . .

Landreth (Newton 1985:75-76) reports the following:

from Shell Island [Shell Island Point, 16SMY25] South west three miles to the south westernmost point of Deer Island to the mouth of a Bayou (Round Bayou on modern maps) which divides Deer from Plumb Island the mouth of which Bayou is about forty yards wide into which Bayou we steer North East by North half a mile in nine feet water. thence North by East half a mile to the mouth of a small Bayou [Deer Island Pass] into which we steer North about fifty yards to the mouth of a large ditch into which we steer West by South about two hundred yards to the East end of the High Land of Deer Island. M'. Hutton and myself Examined and Surveyed

the Timber Soil and situation of this Island. we concluded there was on this little Island one hundred good Live Oak Trees . . . of the Second class from three to Six feet in Diameter with a considerable growth of young Live Oak with a variety of other Timber The Situation is beautifull ten feet high above the marsh nothing to obstruct the view but low marsh from the extensive Atchafalaya Bay and almost Boundless Gulph of Mexico The Soil a rich mixture of almost disolved Shells with rich black mould the Ear is here charmed with the united notes of the Mocking and Red Bird but sometimes disturbed with the dolefull Sound of the Owl which abounds here. the Eye is delighted with the Brilliant varieties of Blossoms produced from the different plumb Trees wild cherry and flowering Shrubs everywhere interspersed in the woods here. I am told that there is a great many Deer on this Island altho I saw none but from the prints of their feet in the marsh surrounding the high Land the[y] must be very numerous. This Island taken abstractively is certainly a delightfull spot —

On January 26, 1819, the Cathcart party entered Atchafalaya Bay and turned southeast into Fourleague Bay. There:

At 1 PM we landed on a shelly point, . . . on the South side of the Peninsula, the West end of branch willow Island, bearing NW by W 1/2 W, 7 or 8 miles, & the NW point of marshy Island W by N, those are the outermost points, which form the channel between branch willow and Marshy Island, which is 2 or 3 miles wide . . . [Prichard et al. 1945:800-801].

Cathcart's usually excellent directions are somewhat confusing at this point, and it was not possible for Prichard et al. (1945:800, footnote 272) to accurately locate his "shelly point." From the general location, however, the editors guessed the location to be near the mouth of Blue Hammock Bayou (Prichard et al. 1945:800, footnote 278). With the more recent discovery of Landreth's journal, it is now possible to accurately locate "shelly point," although Landreth makes no mention of any shell on the "Peninsula." A map of the Atchafalaya and Fourleague bays provided by Landreth clearly shows that the peninsula in question is Halter's Island Point and that "branch willow Island" is most likely Halter's Island (Newton 1985:83). Today, there are no known sites located on Halter's Island Point, although a rather long stretch of wave-washed shell was identified on

the point from aerial photographs by Kathleen Byrd, former Louisiana State Archeologist. This shell most likely represents the "shelly" point noted by Cathcart.

After leaving the peninsula, Cathcart's party continued eastward through Fourleague Bay. Eventually they entered Oyster Bayou, the channel connecting the bay with the Gulf of Mexico. There, Landreth reported:

. . . thence South South West three quarters of a mile to the mouth of the Bayou or Pass at its entrance into the Gulph of Mexico a fine high shell bank on the left hand of the mouth of the Bayou at its entrance into the Gulph on the main here we stop and eat dinner and observe the Latitude which we found to be Lat.^d 29° 8" North.—

. . . here we had a fine meal of oysters the oysters are very fine and in great plenty . . . [Newton 1985:82].

Again, there are no known sites at this location, nor any shell identified on aerial photographs. Perhaps the shell bank was simply a large, natural oyster reef, but that seems unlikely as the expedition ate lunch at the locale and since it is noted as a "shell bank" on Landreth's map of the Fourleague Bay area (Newton 1985:83).

The last possible site described by Cathcart and Landreth before the survey party headed east is of some interest, since it represents another case where no known site is presently recorded at the location noted. Cathcart states:

. . . at 4h.30' PM the middle entrance of Bayou de Large or Buffalo bore due North dist. 1 mile, having a clump of trees over it, at the distance of 4 or 5 miles; the banks high of Clam, & other shells, the marsh inside of them very low & infested with millions of Musquitos which are insufferable; There are 3 entrances to this Bayou which flow in different directions to their junction, where they make one stream & end in the marsh, this stream in its passage runs into a small lake, which is nothing more than a swell of the same Bayou— [Prichard et al. 1945:803].

Landreth records the following:

. . . thence East one mile to the westernmost mouth of Bayou Bufelo which runs North East-

erly from thence East two miles to a point called four mile point in six feet water from said four mile point north about two hundred yards to the middle mouth of Bayou Bufelo which also runs North Easterly and is much about the size of the of the westermost mouth about eighty yards wide. from this point back to the other point a considerable indenture in the shore. here on four mile point is a shell bank on which we pitch our Tents for the night a shell bank being the most comfortable Lodging we can find in this country. very cold this Evening for this climate at Sun Down the Mercury in the Thermometer down to Sixty degrees a very disagreeable air . . . [Newton 1985:85].

It is unlikely that Cathcart's "banks high of Clam and other shells" could refer to anything but a shell midden.

Cathcart and Landreth then proceeded east passing through Lake Pelto, north of the Isles Dernieres and Wine Island, and subsequently some 18 mi up Bayou Petite Caillou. When their pilot assured them that he had traversed all the bayous between Petite Caillou and LaFourche, including Grand Caillou and Terrebonne, and that the timber along them was identical to that seen along the coast, the surveyors turned around and returned to the Atchafalaya (Prichard et al. 1945:806-807). One their way back they camped on the shell bank (i.e. midden) at the mouth of Oyster Bayou (described previously) where four men were harvesting oysters for the Attakaps (Newton 1985:95).

Following the Cathcart survey, a period of 23 years elapsed before any of the sites reported by Cathcart and Landreth were again noted. In 1842, J. J. Williams conducted a survey of potential military approaches to New Orleans for that area of Louisiana west of the Mississippi River. Williams' survey was but one of several surveys performed under the direction of Captain George W. Hughes of the U.S. Army's Corps of Topographical Engineers.

On the 27th of February, 1842, Williams passed the Point au Fer Lighthouse and entered Atchafalaya Bay from the Gulf (Williams 1842:46-48). Heading up the Atchafalaya River, the survey party came to Cathcart's "Shell Island." Williams (1842:48) noted:

. . . came to anchor within the River at the upper end of Shelly Island, for which see map . . .

Williams' map of Shell Island is reproduced here as Figure 3-1. The island is labeled "La Fitte Point," contains numerous live oaks, and at least two solid squares, probably representing buildings, are shown.

Leaving Shell Island, Williams continued up the Atchafalaya to the mouth of Bayou Teche. His map of this stretch of the river is highly detailed and critical to an understanding of the mounds on Berwick's Plantation. For that reason, a portion is reproduced here as Figure 3-2. At the plantation "4 Indian Mounds" are shown and oriented in the same square pattern as noted by Landreth. Four structures, one of which presumably is the Berwick main house, are illustrated just landward of the mounds. One of the mounds is shown directly on the bank, suggesting that it was being cut into by the Atchafalaya at that time. It is clear from this that the mounds, if they had survived, today would be located in downtown Berwick. They, therefore, are not the same as the mound recorded by Weinstein et al. (1978) on Fairview Plantation about 2.5 km further up the river. Nevertheless, it is apparent that the western bank of the Atchafalaya River (or Berwick Bay) was the locus of at least two mound sites and extensive shell middens.

Nine years after the Williams survey, a short note in *De Bow's Review* refers again to what are probably the Berwick Mounds:

Some there are, who attribute the design of these mysterious hills to a security against the annual overflows of the Mississippi; but this is absurd. As on Burwick's Bay, for instance, where stands the most remarkable one in the state, it is pitched upon the highest land, which, even with the greatest overflow ever known, has never been covered with water [Pierce 1851:602].

The fact that Pierce notes only one mound suggests that the other three had been destroyed by 1851. Their demise probably resulted from the combined efforts of man and nature, as development around Berwick Plantation and erosion from the river took their toll.

In addition to the mound at Berwick, Pierce (1851:601-602) notes mounds in nearby Terrebonne Parish, including one rather impressive group on Bayou Black:

In the Parish of Terrebonne there are at least fifteen or twenty of these mounds, situated on

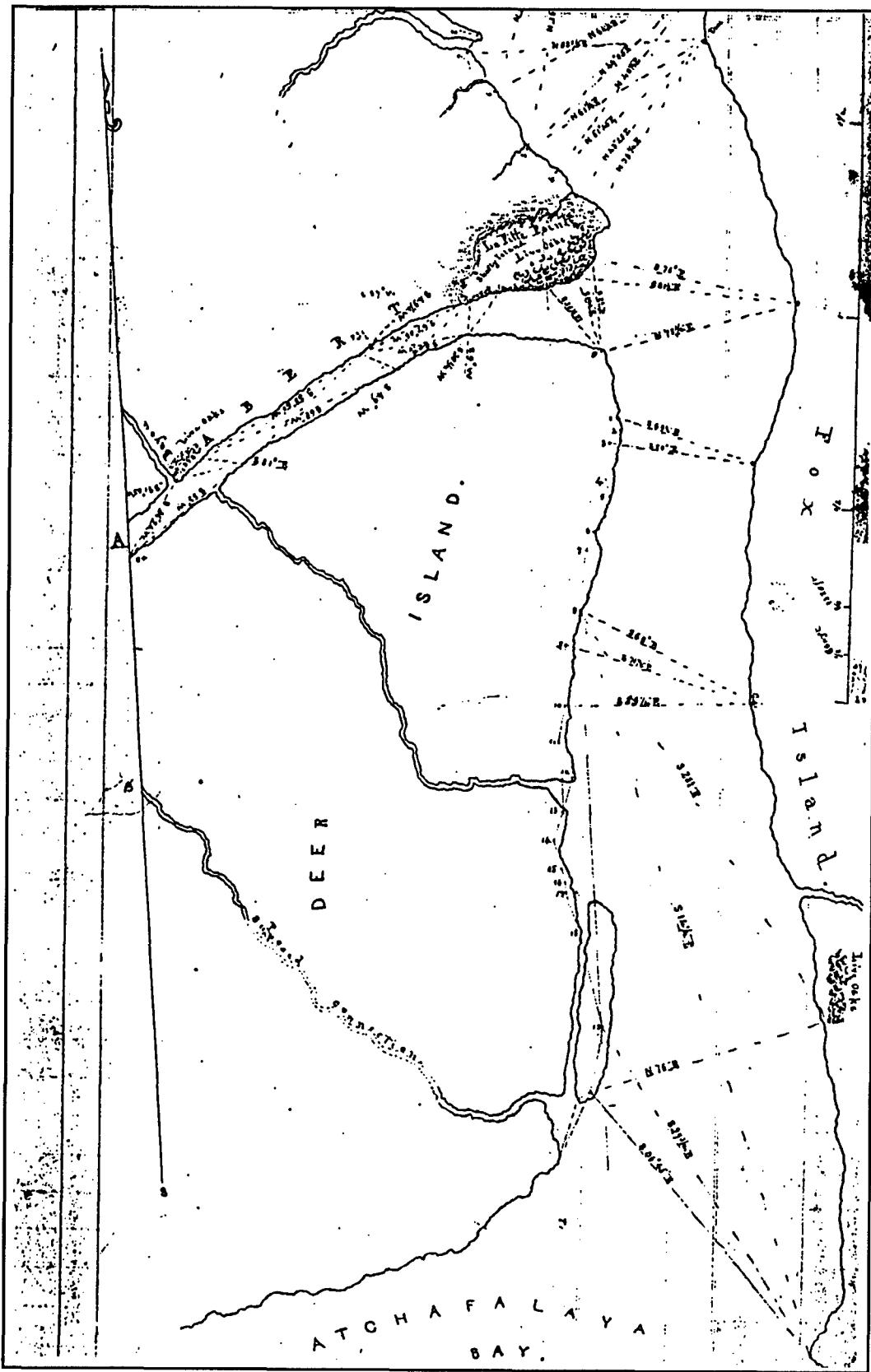


Figure 3-1. La Fitte Point at Shelly Island (Williams 1842:51.)

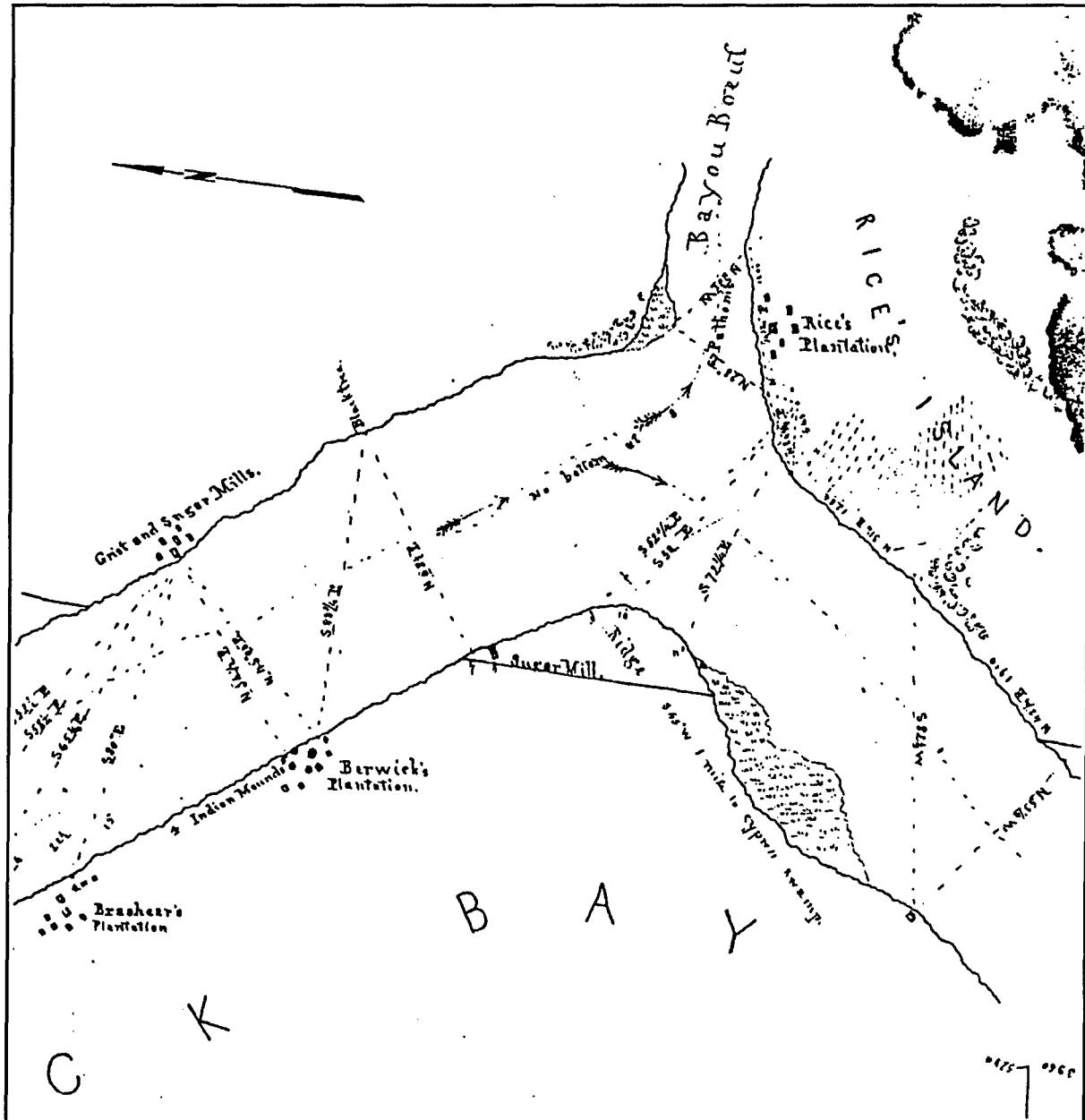


Figure 3-2. Southern end of Berwick Bay showing location of the Berwick Mounds (Williams 1842:56).

the Bayous Grand and Petit Cailloux, Terrebonne, and the Black, of various sizes, and from appearances, of various dates. But the most remarkable of these is at Tigerville, about twenty-five miles from Houma, on the Bayou Black. From these mounds, which are undoubtedly the work of man, several skulls and bones of a human body have been picked, whence it is generally inferred, that they are or have been a repository of the dead, as were the celebrated pyramids of Egypt, and the mausoleums and temples of antiquity.

The site at Tigerville is known today as the Gibson Mounds (16TR5), and will be discussed further below.

The next reference to sites in the study area comes from a Confederate map of St. Mary Parish produced during the Civil War (Figure 3-3). Two Indian mound locations are shown along the west side of Berwick Bay. One mound was obviously the surviving member of the Berwick group. It is shown north of the railroad tracks crossing the area and described as hav-

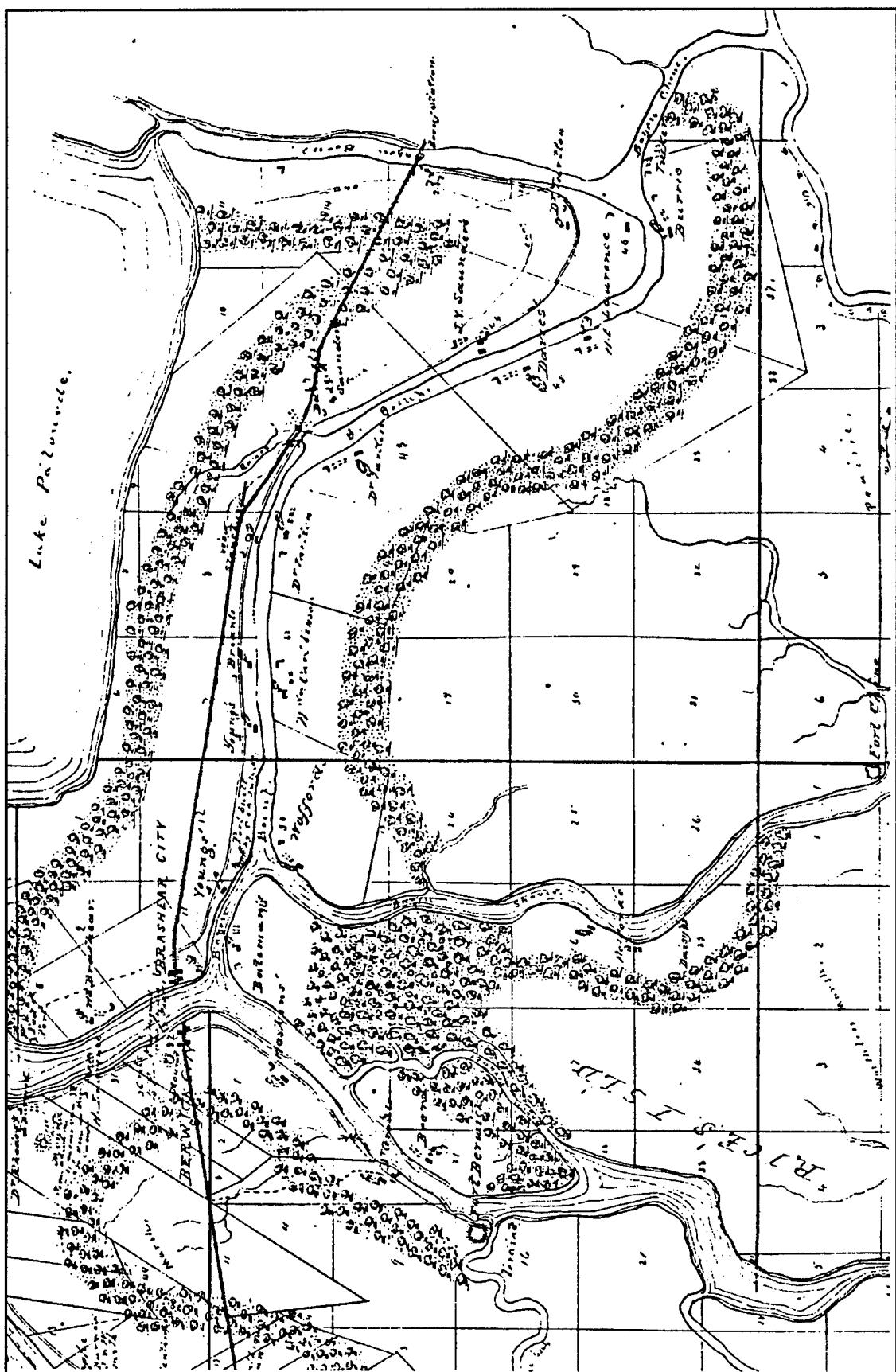


Figure 3-3. Portion of a Civil War-era map of St. Mary Parish, showing plantations, towns, fortifications, and Indian mounds (Confederate States of America 1864).

ing been leveled. The second mound is shown farther north in the present location of the Fairview Plantation Mound, already briefly discussed. Adjacent to this latter mound is the statement, "Mound from which the Yankees can be seen in their camp."

Further reference to the remaining mound at Berwick comes from J. W. Foster (1873) in his book *Pre-Historic Races of the United States of America*. Using notes supplied by Caleb Forshey (Neuman 1984:17-18), Foster notes that an extremely large mound once stood on the west side of Berwick Bay, was built of shells and loam, and stood some 20 ft high. Foster further related that this mound was destroyed by Union troops in 1863 because Confederate forces used it for cover from which to fire at Union ships (Foster 1873:159).

Twentieth Century

Following Foster's publication, a long hiatus occurred before any additional mention of sites in the region was provided. In 1926, Henry B. Collins of the U.S. National Museum spent almost three months examining sites across coastal Louisiana. A brief summary of his survey appeared the following year (Collins 1927). The section pertinent to the present study is presented below:

From Pointe a la Hache, Mr. Collins proceeded to Houma, in Terrebonne Parish, and examined a number of mounds and shell middens. There he was fortunate in having the co-operation of Mr. Randolph A. Bazet, who is deeply interested in the local archeology and who was able to supply valuable information on many earth mounds and shell deposits of Terrebonne Parish. Such remains were found in unexpected numbers along the lakes and bayous, ranging from comparatively small accumulations of shells mixed with charcoal, potsherds, bones, and other refuse to huge deposits of the same material, or "islands" as they are locally called, sometimes a hundred yards or more wide, about 10 feet above the marsh level, and extending in some cases for a distance of almost a quarter of a mile. These Terrebonne Parish shell heaps, or kitchen middens, and the others throughout southern Louisiana, are composed almost entirely of the shells of a small brackish water clam, *Rangia cuneata*, which is very common in the bayous and lakes of the Gulf region. They represent merely the accumulated kitchen refuse of the Indians who once lived along these water ways.

The clams were eaten, and the shells, along with other trash, were cast aside until in the course of time an extensive heap was formed.

After devoting some 10 days to the mounds and shell heaps of Terrebonne Parish, investigation was made of those to the west and north at Gibson, Lake Palourde, Bayou l'Ours, Berwick, Charenton and Avery Island. Having examined and carried on minor excavations at these localities, Mr. Collins continued westward to Pecan Island in the southern part of Vermillion [sic] Parish where he remained for three weeks [Collins 1927:200-202].

Included in Collins' summary is an excellent photograph of the mound on Fairview Plantation. This photograph was reproduced by Weinstein et al. (1978:Fig. 55) in their discussion of that site. The photograph shows an almost conical-shaped structure topped by a burial vault of modern vintage. According to the present owner of Fairview Plantation, the mound reportedly was torn down in the early 1930s (Weinstein et al. 1978:161). The former mound location has been assigned site number 16SMY148, while a nearby shell midden, which undoubtedly was once part of the overall site, has been identified as 16SMY149 (Weinstein et al. 1978).

Following Collins' brief survey and discussion, approximately 30 years elapsed before any other work pertinent to the study area was published. Finally William G. McIntire (1958) conducted a landmark survey of Indian sites and their relation to changing courses of the Mississippi River and its distributaries. The 30-odd-year hiatus between Collins' survey and McIntire's study was unusual, for in the rest of Louisiana and the southeastern United States, archaeological research proceeded at an unprecedented pace. Primarily the result of Work Projects Administration (WPA) funding intended to put the unemployed to work during the 1930s and early 1940s, numerous sites were excavated and the results published. Through the extensive work of Ford (1935, 1936, 1951), Kniffen (1936, 1938), Ford and Willey (1940), Ford and Quimby (1945), Quimby (1951, 1957), Ford et al. (1955), and Ford and Webb (1956), archeological research had come of age in Louisiana.

These and other researchers were then able to establish a basic sequence of culture periods for the project region and denote the diagnostic artifacts used to identify them. Thus, by 1958 McIntire was able to classify his sites not only by type, such as shell

midden or earth mound, but by culture period(s) present. These data were then used to help reconstruct the paleogeography of the region. McIntire identified approximately 61 sites in the general study area. In addition, he (1958:Fig. 8) provided a cross section through the Gibson Mounds (16TR5), based on auger boring data, showing that the mounds had been built over a shell midden base. The shell midden was intermixed with Red River sediment, contained Marksville period ceramics, and led McIntire (1958:63-64) to suggest that the Boeuf course of the Red River was flowing down the old Teche-Mississippi channel during Marksville times.

Sites in the study area were not discussed again until Philip Phillips (1970) undertook his monumental synthesis of Lower Mississippi Valley archeology. Although concerned primarily with the lower Yazoo Basin in western Mississippi, Phillips devoted a significant portion of his study to the establishment of cultural phases for the Lower Valley. This followed the ideas earlier proffered by he and Gordon Willey (Phillips and Willey 1953; Willey and Phillips 1958).

Based primarily upon sherd counts provided by McIntire, Phillips was able to tentatively assign sites in the study area to the various phases he recognized. Thus, sites of the Marksville, Baytown (McIntire's Troyville), Coles Creek, and Mississippi (McIntire's Plaquemine) periods are discussed and illustrated (Phillips 1970:899-900, 911-912, 920-922, 949-951, Figs. 444, 445, 446, 447). One site of particular importance was Mandalay Plantation (16TR1) which Phillips (1970:899) set up as the type site of the Mandalay phase of the Marksville period.

General culture history research in the region was superceded by "contract archeology" or "cultural resources management" after about 1970. Probably most pertinent to the current project is Robert Neuman's (1974) shoreline survey of the Houma Navigation Canal and Bayous La Carpe, Terrebonne, Petit Caillou, and Grand Caillou. He noted sites 16TR6 and 16TR37 along Bayou Grand Caillou, and 16TR86 on Bayou Terrebonne. The year before, Neuman (1973) had conducted another survey of Bayou Lafourche and the Lafourche-Jump Waterway during which he noted site 16LF31. He reiterated the results of these two surveys in *An Archaeological Assessment of Coastal Louisiana* published in 1977.

The 1975 survey by CEI (Gagliano et al. 1975) of the GIWW was the first large-scale, intensive

survey to cross the present study area since McIntire's research in the 1950s. Although actual survey coverage was limited to the banks of the waterway, sites within one mile of the GIWW were also reviewed. Perhaps the most useful contribution of the study was the presentation of a revised sequence of delta lobe formation and associated archeological sites (Gagliano et al. 1975:46-57). However, most researchers in the area no longer employ this sequence (Saucier 1981; Smith et al. 1986; Weinstein and Gagliano 1985).

Also in 1975, Gulf South Research Institute conducted a pipeline survey through parts of Terrebonne, Lafourche, Jefferson, and Plaquemine parishes. The four sites found in Terrebonne Parish were a multi-mound site (16TR32) near Pointe au Chien, and three sites (16TR215, 16TR193, and 16TR194) with both historic and aboriginal components. All three of the latter produced only grog-tempered pottery and were deemed ineligible for the NRHP. Two years later, in 1977, the southern (i.e. underwater) portion of the project area was included in a broad discussion of the prehistoric and archaeological potentials of the Gulf of Mexico by Coastal Environments, Inc. (1977), but no specific information on the project area is given.

In 1978, three highly important reports, based on federally mandated surveys, were published (Altschul 1978; Gibson 1978b; Weinstein et al. 1978). All three resulted in the first site testing by professional archaeologists conducted in the region. The first survey (Weinstein et al. 1978) consisted of an intensive terrestrial survey of the proposed relocation route of U.S. 90 and an inspection of sites within approximately 1.5 km of the route (Weinstein et al. 1978:1). Of the 30 sites recorded, two—Thibodaux (16AS35) and Bayou Ramos I (16SMY133)—were tested to determine National Register significance. In addition, the Gibson Mounds site (16TR5) was examined superficially after it was discovered that one of the three mounds had been cut in half to make room for a proposed mobile home park. The survey crew was allowed to clear and record a profile of the remaining mound remnant and collect surface artifacts from the site.

At all three sites either *Rangia* shells or charcoal samples were collected, and subsequently radiocarbon dates obtained. These became the first absolute dates obtained from any site in the Morgan City-Terrebonne marsh region. Radiocarbon dates and ceramic analysis from the Bayou Ramos I

site prompted the authors to subdivide the Bayou Cutler phase of the Coles Creek period, retaining the term Bayou Cutler for the early half of the period and establishing Bayou Ramos for the latter half. Another regional first was Weinstein et al.'s (1978) recordation of historic-period sites—certainly some of the first documented in Louisiana's coastal zone.

Jon Gibson at the University of Southwestern Louisiana published the second of the 1978 studies. The survey area included proposed channel enlargement sections along bayous Chene, Black, Boeuf, and the Avoca Island Cutoff. Forty-three sites were either discovered or revisited. Testing at Oak Chenier (16SMY49) uncovered a human burial at a depth of between about 70 and 95 cmbs (Gibson 1978b:129-130). Eight other sites (16TR104, 16TR105, 16TR109, 16TR110, 16SMY49, 16SMY62, and 16SMY63) were subjected to coring to determine their environments of deposition. Unfortunately, core locations were not provided, and no radiocarbon dates obtained. Gibson's study was, nevertheless, the first in the area to provide detailed zooarchaeological analyses of certain sites (Byrd 1978), statistical analysis of the relative locations of sites (Gibson and Gramling 1978), and a model of lower Atchafalaya Basin subsistence strategies (Gibson et al. 1978).

Altschul produced the third report of 1978 for New World Research, Inc. Some 33 previously known sites within proposed sewerage line routes across much of Terrebonne and Lafourche parishes were investigated, several located on Bayou du Large. A total of 14 1-by-1-m test units were dug at nine sites, but no radiocarbon dates were obtained. Sites were seriated apparently using Plaquemine ceramics from all contexts (test units, shovel tests, surface collections), thus preventing the identification of individual components within the Plaquemine culture. Altschul's (1978:186-189) conclusion that the Terrebonne marsh area was inhabited by two chronologically separate cultures during Plaquemine times, with the earlier group conducting seasonal exploitation of the region through the use of a modified form of the seasonal round and the later living in permanent villages or dispersed homesteads, is therefore highly questionable. Yet his proposed settlement model has supplied valuable site-specific data of use in future investigations.

Also in 1978, Robert Neitzel examined a proposed pipeline canal route near Montegut, but no cultural resources were located. A remote-sensing survey was also conducted that year to the east of

East Timbalier Island to evaluate cultural resources for an offshore oil port marine facility (Gagliano et. al. 1978). None of the recorded magnetic anomalies were considered historically significant due to the fact that the "seafloor in the survey area is criss-crossed by pipelines and littered with debris related to the offshore mineral extraction industry" (Gagliano et al. 1978).

The next major report to consider sites in the study area was Gibson's (1979) review of previous research throughout the entire Atchafalaya Basin and surrounding regions. Particularly relevant to the present study is his (1979:110-115) summary of the work conducted at Thibodaux (16AS35), Bayou Ramos I (16SMY133), Gibson Mounds (16TR5), and Oak Chenier (16SMY49). Also conducted in the late 1970s were Philip Rivet's surveys of the proposed bridge replacements for the LA 55 bridge over Humble Canal (Terrebonne Parish) and nine bridges on LA 20 between Schriever and Gibson (Rivet 1977, 1979). Three known sites (16TR5, 16TR99, and 16TR100) within or adjacent to the project area were reviewed in the latter survey. Spoil at the bridge sites from DOTD dredging (already in progress) revealed only "modern cultural debris," thus impact to cultural resources was determined to be negative. The LA 55 bridge project failed to locate any cultural resources. Three years later in 1982 Gibson returned to the Atchafalaya to survey selected portions of the levees ringing the basin. Those sites located in potential impact areas were tested. None of these sites, however, lie in the present project area.

In 1983, two cultural resources surveys (Castille 1983; Castille and Holmes 1983) were undertaken in the city of Houma to assess historic sites and standing structures along Bayou Terrebonne for a proposed bridge corridor. These studies identified 283 historic structures, several dating to the middle and late 19th century. Many of the structures are associated with the oyster and shrimp canning/packing industry of Houma. Many structures were located along Bayou Terrebonne on East Main Street and East Park Avenue, an area of much watercraft activity in the late nineteenth century and early twentieth centuries.

Another bankline survey particularly pertinent to the project area was performed by R.A. Flayherty and J.W. Muller for the U.S. Army Corps of Engineers (COE), New Orleans District, in 1983. Bayou Grand Caillou between Bayou Provost and the Houma Navigation Canal were examined. Previously re-

corded sites 16TR6 and 16TR37 were visited while one new shell midden site on Bayou Grand Caillou (16TR151) and 69 derelict vessels were newly recorded. 16TR151 was thought to be Plaquemine or Mississippian in date. A magnetometer was used in this survey, but no significant anomalies were recorded. Flayharty and Muller noted that local informants knew of submerged watercraft; and that the negative remote sensing results were probably due to the fact that most, if not all of these craft, were of mostly wooden construction.

In 1984, Floyd and Stuckey reported on a remote-sensing survey conducted to determine the location of seafloor or subbottom hazards to construction of a 10-inch pipeline for Texas Gas Transmission Corporation. The instruments used in this survey were a magnetometer, side-scan sonar and a subbottom profiler. The pipeline route was in Blocks 2 and 9, south of Isles Dernieres and west of Cat Island Pass. Eleven magnetic anomalies were located; but all ranged from 15 to 24 gammas with very brief signature widths, suggested the anomalies "represented debris discarded during prior construction activities in this rather congested production field" (Floyd and Stuckey 1984). Also in 1984, William McIntire and Robert Baumann examined a proposed weir site near Marmande Ridge and Minors Canal. They located 16TR69, a rangia shell midden partially destroyed by the digging of Minors Canal. Test excavations showed that possible intact deposits remained at the site but would probably be eroded away within a few years due to boat traffic and use of the site as a fishing camp. Weir construction was, therefore, allowed to proceed.

William Haag's (1985) subsequent survey of three proposed forced drainage areas in Terrebonne Parish (lower Montegut, Pointe au Chien, and Isle de St. Jean Charles) encountered no cultural resources. The following year R. Christopher Goodwin & Associates, Inc., examined the route of the proposed Larose and Golden Meadow Hurricane Protection Levee. While no new sites were identified, a previously recorded site (16LF99) outside the right-of-way was tested to determine its size and cultural affiliation (Poplin et. al. 1986). Likewise the pipeline survey Weinstein (1985b) conducted for the Texas Gas Transmission Company in Terrebonne Parish located no cultural resources. Yet an unrecorded mound group (16TR189) was noted on Bayou Sale, 2.4 km north of the pipeline route. McIntire and Baumann (1985) likewise found no new sites during their survey of a proposed water control struc-

ture near Lake Carrion Crow, but did conduct test excavations at known shell midden site 16TR66. This site was in excellent condition and thus eligible for the NRHP. Fortunately, 16TR66 lay 205 m outside the project area and would not be impacted.

A survey of the Morgan City hurricane protection project (Goodwin et al. 1985a) provides a detailed review of the history of the Morgan City area, but is of particular importance for the data obtained from a testing program at the Goat Island site (16SMY1). Although little artifactual data were collected, three radiocarbon dates clustering around A.D. 1100 were obtained on *Rangia* shells and charcoal from two of the units (Goodwin et al. 1985a:Table 8). Using these dates, plus previous ceramic counts provided by Weinstein et al. (1978), the authors review the chronology of Coles Creek period components in the region. They argue that the Goat Island and Bayou Ramos I (16SMY133) sites are contemporary (Goodwin et al. 1985a:110), although it is also possible that more than one component exists at Goat Island. The few diagnostic sherds noted by Weinstein et al. (1978) could relate to either the Bayou Cutler or Bayou Ramos phase, while the dates obtained by Goodwin et al. (1985a) could suggest another component either of, or related to, the transitional Coles Creek/Plaquemine culture St. Gabriel phase (Brown 1985b; Weinstein 1987b).

Weinstein (1987a) conducted a survey along Bayou Mauvais Bois in the Terrebonne Parish marshes west of the project area. This study involved investigations along two proposed pipelines and examined several prehistoric shell middens (16TR190-16TR192). All three sites were avoided during pipeline construction. William McIntire and Robert Baumann conducted three small surveys that same year, one for a proposed sewerage line and facilities south of Houma (1987a), another for a levee and flood gate near Chauvin (1987b), and a third for a levee and pump station on Bayou Grand Caillou near Dulac (1987c). Portions of Bayou Little Coteau, Ashland Canal, St. Louis Canal, and Bayou Petit Caillou were examined during the first survey, but no new or previously recorded sites could be located. No cultural resources were noted in the project area on the second survey, but nearby sites 16TR10 and 16TR86 were determined to be one in the same site. Likewise, the third survey produced no findings, although nearby known site 16TR6 was discussed.

In 1989 Heartfield, Price, and Green, Inc., conducted a survey for Tenneco Gas of a proposed pipe-

line beginning near the juncture of Bush Canal and Bayou Terrebonne and extending east across 1.6 mi of freshwater marsh. While no new sites were located, 16TR10/86 was reexamined and the site limits refined. Also, in that year Pearson et al. (1989) produced a general study of the history of water-borne commerce and shipwreck potentials within the New Orleans District. Although the project area was not considered specifically and the navigation history of the immediate area only minimally discussed, this study did note the existence of several reported historic shipwrecks in the general vicinity of Cat Island Pass. Thomas Birchett and Charles Pearson (1998) conducted a remote sensing survey of the Cat Island Pass Channel portion of the Houma Navigation Canal in 1987. Four anomalies with characteristics similar to known shipwrecks were identified, but diving confirmed that none represented significant cultural resources.

Coastal Environments, Inc., conducted a large-scale investigation of the Terrebonne marsh as part of a New Orleans District COE effort to better protect Morgan City from floodwaters (Weinstein and Kelley 1992). Thirty-four new sites were located, 36 known sites revisited, and the collections from another 21 known sites reviewed. One thrust of this study was the documentation of changes in the deltaic environment and human settlement patterns through time. Site densities were also examined, and the future condition of the cultural resource base in the area predicted based on models of habitat change.

Rebecca Saunders of the Museum of Natural Science at Louisiana State University tested 16TR22 near the intersection of Mound Bayou and Bayou Grand Caillou in 1994. Her aims were to determine the site's National Register status and to look for complicated stamped, shell-tempered ceramics similar to those found in Florida. Two of the three possible mounds at the site reported by McIntire in 1951 had apparently eroded away by this time, but test units were placed in the surviving mound. Radiocarbon dating confirmed a Coles Creek component at this site, in addition to Mississippi Period and historic components.

Late in 1995, the New Orleans District COE instructed R. Christopher Goodwin & Associates, Inc., to conduct additional investigations on eight of 37 derelict watercraft previously identified on Bayou du Large in 1992 (Stout 1992). That study had ex-

amined Bayou du Large from the Falgout Canal to Grand Pass. All eight vessels were reportedly too badly deteriorated or inaccessible below the water-line by 1995, so six others were examined instead (Robinson and Seidel 1995). This study involved photography, measured drawings, historical research and oral interviews.

The following year in 1996, R. Christopher Goodwin & Associates, Inc., surveyed the route of a proposed gas transmission line from the Gulf of Mexico to Lafourche Parish (Miller et al. 1996). Two new sites (16LF65 and 16LF66) with Plaquemine and nineteenth-to-twentieth-century components were discovered. The former was recommended for additional testing, while the latter was declared eligible for the National Register of Historic Places (NRHP) and mitigation recommended. A year later this same company examined two proposed dredge disposal areas on Bayou du Large in Terrebonne Parish (Walter et al. 1998). No archaeological sites were encountered, but six standing structures were documented and declared ineligible for the NRHP. Also in 1997, R. Christopher Goodwin & Associates, Inc., surveyed a pipeline corridor in Lafourche Parish near Larose (Williams et al. 1998). Three standing structures were recorded but deemed ineligible for the NRHP. This company also conducted data-recovery excavations for the same pipeline company in 1997 at 16LF66 located at the confluence of bayous Blue and Manuel. Midden deposits and numerous subsurface features were identified during the excavation of this Plaquemine site, as well as 37 human burials (Miller et al. 2000).

Two mitigation reports on historic sites in Terrebonne Parish appeared in print in 1998 and 1999, both produced by CEI. The earlier volume describes field investigations conducted at the Donner Sawmill Residential Area (16TR116), near the present-day town of Donner, in 1989 (Hahn and Schwab 1998), and builds on previous work at the site by Castile et al. (1979) and Castile and Pearson (1980). Donner was a company town occupied from about 1900 to 1938 before being reclaimed by the swamp. The second report explains similar excavations conducted in 1982 at the Goodland Cypress Sawmill Company site (16TR114) in Chacahoula (Whelan and Pearson 1999). Artifact assemblages from the homes of sawmill administrators, white laborers of Cajun descent, and black sawmill workers were compared in an attempt to determine if race, culture, and economic status were reflected in their material culture.

The last studies conducted in the project region to date, and two of the most pertinent are those by R. Christopher Goodwin & Associates, Inc., for the Morganza to the Gulf Feasibility Study (Brown et al. 1997, 2000). The earlier report is a “Literature Search and Records Review” type study, the main aim of which was to create a predictive model for site locations in a delta setting. The latter report details a sample survey conducted to test the predictive model, which states that sites will be found on natural levees. Results verified the

model, while six new sites and two new standing structures were discovered. Five known sites and three previously recorded standing structures were also revisited. Three sites (16TR19, 16TR33, and 16TR304) and two standing structures (55-1013 and 55-1113) were recommended as eligible for the NRHP. The Louisiana Divisions of Archaeology and Historic Preservation disagreed with three of these recommendations and have determined site 16TR304 and structures 55-1013 and 55-1113 as not significant.

CHAPTER 4

ABORIGINAL CULTURAL CHRONOLOGY

This section will provide data on the postulated cultural chronology of the central Louisiana coast, particularly the lower Atchafalaya Basin and adjacent marshes in the prehistoric and contact periods. As much of this information has been presented previously (Brown et al. 1997, 2000; Gibson 1978b, 1979; Goodwin et al. 1985a; Neuman 1977, 1984; Weinstein 1994; Weinstein et al. 1978; Weinstein and Kelley 1992), only a brief synopsis is provided.

Prehistoric Period

Figure 4-1 provides the latest chronological framework of the prehistory of the Louisiana coastal zone, based on Weinstein (1985a). Since the earliest intact and accessible landforms within the study area are related to the Teche-Mississippi course and its distributaries (ca. 3800 to 1900 B.C.), the following discussion will begin with the earliest culture period that was in existence during that time: the Middle Archaic. Although earlier Paleo-Indian and Early Archaic components are known from the coastal zone (see, for instance, Coastal Environments, Inc. 1977; Gagliano 1967, 1970; Weinstein et al. 1979b), these generally occur in areas where relict Pleistocene-age, Prairie Terrace features are being exposed by shoreline transgression or on uplifted salt dome islands. Such features are deeply buried within the present study area and would not be encountered in anything but relatively deep borings.

The previous Paleo-Indian and Early Archaic populations are believed to have been arranged around a band-level society which practiced hunting and gathering of wild foodstuffs, probably organized around a seasonal round in which specific periods of the year were devoted to the collection of a particular resource. The Paleo-Indians were supposedly adapted to terminal Pleistocene or early Holocene environments, while Early Archaic peoples were adapted to an expanding boreal forest environment (Weinstein and Kelley 1984:32-34). Lithic tools, principally in the form of distinctive projectile point types, are almost the only means archeologists have for identifying remains of these earlier periods.

Middle Archaic Period, 5000-3000 B.C.

The Middle Archaic period is characterized by widespread regional differentiation of cultures, and a number of developments in ground stone technology. The latter includes grooved axes, atlatl weights and pendants, as well as more extensive use of grinding stones, which first appeared in the previous period. This period also roughly corresponds with the Hypsithermal Interval, which brought increased warmth and aridity to areas bordering the Great Plains (Wood and McMillan 1976). The impact of this climatic shift on other portions of the Southeast is not well known at present. It may be that the intensive shellfish collecting evidenced at some riverine sites

Houma Navigation Canal Deepening Project

STAGE	PERIOD	CULTURE	TIME INTERVAL	PHASES		
				EASTERN AREA	CENTRAL AREA	WESTERN AREA
FORMATIVE	HISTORIC	VARIOUS CULTURES	A.D. 1800		VARIOUS TRIBES	LITTLE PECAN
	MISSISSIPPI	MISSISSIPPINIAN PLAQUEMINE	A.D. 1700			
			A.D. 1600	DELTA NATCHEZAN	PETITE ANSE	
			A.D. 1500	MEDORA	BURK HILL	BAYOU CHENE
			A.D. 1200	BARATARIA		
	COLES CREEK	TRANSITIONAL COLES CREEK	A.D. 1000	ST. GABRIEL	THREE BAYOU	HOLLY BEACH
			A.D. 900	BAYOU RAMOS	MORGAN	JEFF DAVIS
			A.D. 850	BAYOU CUTLER	WHITE LAKE	WELSH
			A.D. 700	WHITEHALL	?	ROANOKE
			A.D. 400	GUNBOAT LANDING	VEAZEY	LAKE ARTHUR
ARCHAIC	MARKSVILLE	MARKSVILLE	A.D. 200	MAGNOLIA & MANDALAY		
			A.D. 1	SMITHFIELD	JEFFERSON ISLAND	LACASSINE
				LABRANCHE		
			250 B.C.	BEAU MIRE	LAFAYETTE	GRAND LAKE
				PONTCHARTRAIN		
LITHIC	POVERTY POINT	POVERTY POINT	500 B.C.	GARCIA	BEAUVIRAGE	
	LATE ARCHAIC	ARCHAIC	1000 B.C.	BAYOU JASMINE	RABBIT ISLAND	?
			1500 B.C.	PEARL RIVER	COPELL	BAYOU BLUE
			3000 B.C.	MONTE SANO	BANANA BAYOU	?
	EARLY ARCHAIC		5000 B.C.	AMITE RIVER	ST. HELENA	?
PALEO	LATE PALEO	PALEO-INDIAN	6000 B.C.	JONES CREEK	VATICAN	STROHE
	EARLY PALEO		8000 B.C.	?	AVERY ISLAND	?
	PRE-PROJECTILE POINT		10,000 B.C.	?	?	?

Figure 4-1. Cultural chronology of south Louisiana (Weinstein 1985a).

of this period represents a response to this change (Lewis and Lewis 1961:20). Stoltman (1978:714-715) has also suggested that plant collecting increased in importance during this time.

During this period sedentism and more complex social organization are reflected in increased site size, midden development, the use of storage pits, utilization of local raw materials, and an increase in the number of burials (Jeter et al. 1989:86; Weinstein and Rivet 1978). Additionally, evidence of Middle Archaic mound building has been found in South Louisiana (Gibson and Shenkel 1989; Homberg 1992; Manuel 1979, 1981; Neuman 1992; Russo 1994: Table 1; Saunders 1994).

In coastal Louisiana, very little evidence of the Middle Archaic period has been recognized. What there is comes generally from the Florida Parishes north of Lake Pontchartrain and in the Prairie Terrace region of southwestern Louisiana. Three regional phases have been identified, Monte Sano, Amite River, and Banana Bayou, but all are somewhat removed from the area under consideration. Perhaps components of the Banana Bayou phase, named for a small conical mound (16IB24) situated on the flanks of Avery Island that produced material and radiocarbon dates suggestive of a transitional Middle to Late Archaic age (Gagliano 1967; Brown and Lambert-Brown 1978), will eventually be found in the area. Artifacts recovered from the primary mound at Banana Bayou included Williams and Pontchartrain points, crude bifaces, lithicdebitage, and a relatively large percentage of amorphous baked clay objects (Brown and Lambert-Brown 1978:Table 5).

Closer to the study area, and of immediate importance to the Teche-Mississippi course, is the location of site 16IB101 on the edge of the Prairie Terrace overlooking the Teche channel just south of New Iberia. This site reportedly has a Middle Archaic component (Coastal Environments, Inc. 1977:3:Pls. 4-5) and may represent an elevated habitation locale associated with the active Teche-Mississippi.

Late Archaic Period, 3000-1500 B.C.

Research elsewhere in eastern North America suggests that the Late Archaic period was a time of marked population increases and the beginning of extensive trade networks. The evidence for the former is seen in the appearance of large habitation sites

such as Indian Knoll, Kentucky (Webb 1946), while the latter is reflected in the exotic raw materials that occur at some sites. Cultivation involving several native seed plants, including sumpweed, chenopod, and sunflower, as well as squash, which is now thought to have been independently domesticated in eastern North America, also began during this period (Smith 1989).

Mound building continued into the Late Archaic in the Southeast. Recent excavations and a reevaluation of past investigations now suggest that the building of conical mounds was an inherent part of Archaic period culture in the southeastern U.S. (Piatek 1994; Saunders 1994; Saunders et al. 1994). At least 11 mound sites in Louisiana and Florida have been securely radiocarbon dated to the Archaic period (Russo 1994:Table 1). Mound building, and initial plant cultivation, appears to reflect an increase in social and cultural complexity through the Late Archaic period.

In coastal Louisiana, three geographically separated phases have been identified, but only the Pearl River phase, based on material from the Cedarland site (22HA506) in Hancock County, Mississippi (Gagliano and Webb 1970), is relatively well known. The Copell Phase is based on excavations into an apparent preceramic cemetery on Pecan Island (Collins 1941), while the Bayou Blue Phase is named after a site (16AL1) in Allen Parish (Coastal Environments, Inc. 1977; Gagliano et al. 1982; Weinstein et al. 1977, 1979b). Typical diagnostic artifacts include Evans, Ensor, Gary, Maçon, Palmillas, and Pontchartrain point types (Gagliano and Webb 1970; Gibson 1976), along with ground-stone implements such as winged atlatl weights, and tubular pipes (Gagliano and Webb 1970:Table 3).

Gibson (1976) has noted several apparent Late Archaic assemblages from the Prairie Terrace surface around Lafayette, while Weinstein et al. (1979b) record similar sites near Opelousas. Of particular importance to the present study are several Late Archaic sites that apparently are directly associated with Teche-Mississippi natural levees (Gagliano et al. 1978). These are sites 16SL16 and 16SL19, reported by Neuman and Servello (1976:24) in the Holocene floodplain east of Opelousas. Their presence is almost certainly related to the Teche channel after the Mississippi had abandoned the course. The fact that such sites exist on the Teche-Mississippi natural levees to the north of the study area implies that similar sites could occur in the Terrebonne marsh region.

Poverty Point Period, 1500-500 B.C.

In much of eastern North America this time interval witnessed a transition from Archaic hunting and gathering cultures to Woodland cultures characterized by food production, pottery manufacture, and mound building (Stoltman 1978:715-717). Current interpretations suggest that these three features have different and possibly unrelated origins. As noted above, tropical domesticates had reached the East prior to 2000 B.C., and there is good evidence of cultivation of native seed plants in the Kentucky and Ohio area by 1000 B.C. (Struever and Vickery 1973). Ceramics probably appeared somewhat earlier than this in the third millennium B.C. along the Atlantic Coast (Stoltman 1978:715), and mound building may have developed independently in several areas by 1000 B.C.

In the Lower Mississippi Valley, this transition is marked by the development of the distinctive Poverty Point culture. Among the material characteristics of this culture are baked clay balls or Poverty Point objects, microlith and lapidary industries, and earthworks (Webb 1977). Pottery is not abundant, but fiber-tempered and sand-tempered wares have been found at several sites. Subsistence data are, in general, few, but they suggest a continuation of an Archaic pattern of intensive collecting of wild plants and animals. However, there is mounting evidence for the cultivation of a tropical domesticate, squash, at Poverty Point sites (Ford 1974; Jackson 1986; Shea 1978).

As with the previous culture periods, several Poverty Point period phases have been established for south Louisiana, but their recognized ranges are either too far east or west to include the present study area. Nevertheless, Poverty Point components have been recognized at a number of sites relatively near the study area, and it is likely that ties to either the Rabbit Island (Phillips 1970:875) or Beau Rivage (Gibson 1974a, 1974b, 1976) phases will be found. In fact, the Rabbit Island site itself (16SMY8) is located only about 30 km west of the mouth of the Atchafalaya River, at the distal end of the Bayou Sale distributary—a channel emanating from either the Maringouin- or Teche-Mississippi course (Smith et al. 1986:Pl. 38; Weinstein and Gagliano 1985:123). Other sites with Poverty Point components include Cargill Canal (16SMY102) located at the edge of the Belle Isle salt dome (Brown et al. 1979:36-40; Weinstein 1984:11-13; Veatch 1899:299), and site 16SMY32 (Coastal Environments, Inc. 1977:3:Pls. 4-5), a locale possibly associated with a Teche-Mis-

sissippi distributary (Smith et al. 1986:Pl. 39). Two Late Poverty Point sites located in the marshes of Terrebonne Parish by Weinstein and Kelly (1992) are 16TR211 and 16TR212. The former, a shell midden, and the latter, an earth midden, both produced Poverty Point objects. Their presence indicates that the abandoned channel along which the sites occur (Turtle Bayou) is a Teche-age channel.

Tchula Period, 500 B.C.-A.D. 1

This period in the Lower Mississippi Valley is characterized by the integration of food production, pottery manufacture, and mound building into a single cultural system. In the southern portion of the valley these developments take place in an archeological culture called Tchefuncte. Originally defined in southern Louisiana (Ford and Quimby 1945), Tchefuncte culture is now recognized to extend as far north as the vicinity of Clarksdale, Mississippi, and as far west as northeast Texas. The diagnostic artifacts of this and most of the succeeding prehistoric cultures of the Lower Mississippi Valley are distinctive ceramics. Tchefuncte pottery is characterized by a laminated paste that appears to lack tempering. Replication studies suggest that the laminated texture is simply the result of minimal preparation of the raw material (Gertjeljansen 1982; Gertjeljansen and Shenkel 1983), an expected feature of an incipient ceramic technology. Other diagnostic attributes of Tchefuncte ceramics include the use of podal supports and decorative techniques such as jab-and-drag incising.

The evidence for food production in Tchefuncte culture presently comes from one site, Morton Shell Mound (16IB3), where remains of two tropical cultigens—squash and bottle gourd, and one possible native cultigen, knotweed—were recovered (Byrd and Neuman 1978:11-13). Given the limited nature of these findings, the importance of cultivation in relation to the remainder of the subsistence base is still uncertain. Mound construction, now well documented for the preceding Late Archaic and Poverty Point periods, is surprisingly not clearly associated with Tchefuncte culture. Alan Toth (1988:27-28) has recently reviewed the evidence for Tchefuncte burial mounds and suggested that they are the result of diffusion of certain aspects of Marksville burial practices among a few late Tchefuncte groups. Further research is required to verify this hypothesis.

Again, no specific phase of Tchefuncte culture has been defined for the present study area, and, in

fact, no Tchefuncte sites were known from it prior to Weinstein and Kelley's 1992 Terrebonne Marsh study. Tchula components, most of them late, were identified at 16AS16, a single mound site; 16AS36, a possible mound site; the shell midden sites 16TR28, 16TR31, and 16TR60; and the two Poverty Point sites mentioned above, 16TR211 and 16TR212. Given the proximity of the Lafayette phase and its association with the natural levees of the Teche-Mississippi meander belt (Gagliano 1967; Phillips 1970; Gibson 1974b, 1976; Weinstein 1986), it is highly likely that additional components of this phase are present. The fact that Tchefuncte sites of the Lafayette phase or a similar entity occur within the study area is particularly interesting since the Lafayette phase is the one relatively reliable case where conical burial mounds have been associated with the Tchefuncte culture (Gibson 1974b; Weinstein 1986). Gibson (1974a:85) suggests that the mounds served as communal burial locales for a dispersed population residing at small, seasonal base camps or semi-permanent villages.

Marksville Period, A.D. 1-400

In many parts of eastern North America this period is marked by evidence of extensive interregional contact through a phenomenon labeled the Hopewell Interaction Sphere (Caldwell and Hall 1964). The focal points of this interaction sphere were societies in the Ohio and Illinois River valleys which acquired large quantities of exotic raw materials, including obsidian, copper, mica, shark's teeth, and marine shells, in exchange for specialized finished goods such as copper panpipes and ear spools (Stoltman 1978:721). Various theories have been offered to explain the nature of this interaction, some emphasizing socioreligious systems and others pointing to economic networks, but the problem remains unresolved. Within the Lower Mississippi Valley, the culture that participated in this interaction sphere is termed Marksville.

Toth (1988:211-213) has argued that Marksville culture developed out of Tchefuncte as a result of intermittent contacts with cultures in the Illinois River valley area, but he only speculates on the nature of these contacts. He emphasizes that the evidence for Hopewellian interaction is largely limited to the Marksville mortuary system and aspects of ceramic decoration. Other cultural subsystems, such as subsistence and settlement pattern, may have changed very little. Economic data from Marksville sites are extremely limited, but information from contempo-

rary occupations in the Midwest suggests a pattern of intensive collecting of wild plant foods and high density faunal resources, such as fish, supplemented by cultivation of native North American seed plants and a few tropical cultigens (Asch et al. 1979). Present evidence indicates that maize was either not present at this time or of only minor importance.

It is for the Marksville period that the first large-scale evidence of sites in the study area can be found (Altschul 1978; Gibson 1978b; McIntire 1958; Phillips 1970; Weinstein et al. 1978). Principal among these are the Gibson Mounds (16TR5) and Mandalay Plantation (16TR1). As noted earlier, Phillips (1970) designated Mandalay Plantation as the type site of the Mandalay phase. With the creation by Toth (1977, 1988) of the Jefferson Island phase as representative of the general area's early Marksville phase, Weinstein et al. (1978) reduced Mandalay to the late Marksville period. At present, only a portion of the assemblage from the Gibson Mounds (Weinstein et al. 1978) can be unequivocally assigned to the early Marksville period. Similarly, although there are many mounds in the area, it is not presently possible to assign them to any but the very latest Coles Creek and Mississippi periods.

A good percentage of late Marksville sites exist in the study area. Many of these were initially identified by McIntire (1958:Pl. 5) as Troyville in age, but have been reassigned to the late Marksville period on the basis of revised ceramic analysis (Weinstein and Gagliano 1985:141-142, Fig. 7). Most of these sites are associated with the du Large, Marmande, and Mauvais distributary channels, although four sites (16TR4, 16TR47, 16TR76, and 16TR77) are located on the possible relict beach ridge near Lake Penchant (Weinstein and Gagliano 1985:Fig. 7). Some of the best evidence for a late Marksville component in the study area comes from Gibson's (1978b:Table 16) test pit into the Oak Chenier site (16SMY49) near the junction of bayous Chene and Penchant. The lower levels of the pit (35-75 cm) yielded decorated ceramics only of the late Marksville period: Marksville Incised, var. *Yokena* and Marksville Stamped, var. *Manny*. These levels also produced a flexed, human burial (Gibson 1978b:129, Fig. 28).

Baytown Period, A.D. 400-700

The period following the Hopewellian florescence has been characterized as a time of cultural decline throughout much of eastern North America

(Griffin 1967:187). This is certainly implied in Phillip's (1970:901) statement that ceramic decoration was "at a remarkably low ebb" during this period in the Lower Mississippi Valley. Recently, however, a number of researchers have suggested that the apparent decline may not have been as pervasive as previously believed. In the Midwest, Braun (1977) and Styles (1981) have argued that this period, in contrast to earlier interpretations, was a time of population growth and increased regional social integration. Along the Florida Gulf coast an elaborate culture called Weeden Island developed during this time (Milanich and Fairbanks 1980:89-143). Even in the Lower Mississippi Valley, new data indicate that the Baytown period was marked by the appearance of two painted pottery complexes (Belmont and Williams 1981). The earlier complex, termed the Quafalorma horizon, developed during the Troyville subperiod and exhibited striking similarities to early Weeden Island ceramics. The later complex, called the Woodville horizon, characterized the Deasonville subperiod and was less elaborate. The remainder of the ceramic assemblage of the Baytown period consisted of a large quantity of Baytown Plain and smaller amounts of decorated types such as Mulberry Creek Cordmarked, Salomon Brushed, and Alligator Incised.

Changes were also occurring in the stone tool tradition during this period. Small arrow points began to replace dart points, reflecting a transition from the atlatl to the bow and arrow. Subsistence data from the Lower Mississippi Valley are limited for this period, but in the Midwest, Styles (1981) has identified a pattern of intensive, localized collecting of wild plant and animal resources supplemented by increased cultivation of both North America and tropical cultigens. Mound building continued in the Baytown period, and there are indications that a shift from a mortuary function to a building substructure began toward the end of this time (Rolingson 1982).

Much like the remainder of south Louisiana, the Troyville-like culture present within the study area during Baytown times is poorly understood. To date, most sites yielding examples of painted pottery on a Baytown Plain paste have been assigned to this time frame. As can be seen by Figure 4-1, however, this leaves little room for fine-scale cultural differentiation, and the Whitehall phase, named for the Whitehall site (16LV19) on the Amite River (Phillips 1970; Weinstein 1974), remained the sole phase representative for all of southeast and south-central Louisiana until recently.

Kidder et al. (1995) have suggested that Whitehall be limited to that area north of the Barataria Basin, and have established the Grand Bayou and Des Allemands phases for coastal Louisiana. The earlier phase, Grand Bayou, is represented by ceramics similar to the Troyville types seen at the Greenhouse site (16AV2) and in the Tensas Basin. These include Marksville Incised, *vars. Anglim* and *Vick*, Marksville Stamped, *var. Baton Rouge*, Larto Red and late varieties of Churupa Punctated. Grand Bayou phase components have been identified at 16SC42, 16SC43, 16SC45 and 16JE60.

The later Des Allemands phase is distinguished by the lack of Marksville Stamped and Incised, continued red filming, the appearance of Evansville Punctated, Hollyknowe Pinched and Mazique Incised, *var. Bruly*; the Weeden Island-like Woodville Zoned Red, and early varieties of French Fork Incised; and the "six mile" rim treatment. Single line varieties of Coles Creek Incised also begin to appear during this phase. 16JE60 is considered the type site for the Des Allemands phase. The Gibson Mounds (16TR5), where Weinstein et al. (1978:Tables 29-30, Fig. 63) reported a ceramic assemblage composed of Coles Creek Incised, *var. Stoner*, Larto Red, *vars. Larto* and *Silver Creek*, Mazique Incised, *var. Bruly*, Woodville Zoned Red, *var. Woodville*, French Fork lugs, and Evansville Punctated, *var. Amite* (Phillips' [1970] "six-mile treatment"), as well as numerous varieties of French Fork Incised, apparently dates to this phase.

At Richeu Field (16TR82), a low, pyramidal mound on the Teche-Mississippi natural levee about 1.5 mi (2.4 km) southwest of Gibson, Weinstein et al. (1978:Tables 38-39) recovered sherds of Larto Red, *var. Larto*, Evansville Punctated, *var. Amite*, and several rims of Baytown Plain, *var. Troyville*. This site, probably a small hamlet associated with the more prominent village at Gibson, could contain components from both Grand Bayou and Des Allemands phases.

Coles Creek Period, A.D. 700-1200

Elsewhere in eastern North America this time interval corresponds to the latter portion of the Late Woodland period and the beginning of the Mississippi period. Within the Lower Mississippi Valley, a cultural florescence that shows a marked resemblance to Weeden Island culture of northwest Florida occurs during this period. The precise nature of the

relationship of Coles Creek culture to Weeden Island is uncertain, but the similarities in ceramic decoration and community pattern are unmistakable. Both were characterized by the use of incised, stamped, and punctuated pottery types in which the decorative zone is largely restricted to a band around the rim of the vessel, and by the construction of small platform mounds around plazas. The latter are generally interpreted as an indication of the development of stratified social systems during this period. These societies were apparently based on economies that included the cultivation of maize. While direct evidence for this is lacking from sites in the Lower Mississippi Valley, the remains of corn have been recovered from Weeden Island sites (Milanich and Fairbanks 1980:127) and from contemporary Late Woodland sites in the Midwest (Styles 1981).

Coles Creek period sites are relatively common within the study area, 24 of which having been plotted by Weinstein and Gagliano (1985:Fig. 9), and can be related to one or more of three temporally sequential phases for the region: Bayou Cutler, Bayou Ramos, and St. Gabriel. While the Bayou Cutler phase (established by Phillips [1970], based on data from Kniffin [1936] and McIntire [1958]) and the St. Gabriel phase (set up by Brown [1985b] on data supplied by Woodiel [1980]) are situated primarily east of the study area, the Bayou Ramos phase is centered squarely within it. As noted, this phase was created by Weinstein et al. (1978) using data from two test pits at the Bayou Ramos I site (16SMY133) located at the junction of Bayou Ramos and Bayou Boeuf.

As with most other phase designations, it is the various ceramic types and varieties which serve to separate the Bayou Ramos phase from its earlier and later Coles Creek counterparts. Bayou Cutler components can be recognized by many of the classic Coles Creek ceramic types and varieties: Coles Creek Incised, vars. *Coles Creek* and *Athanasio*; Mazique Incised, var. *Mazique*; Pontchartrain Creek Stamped, var. *Pontchartrain*; and French Fork Incised. Bayou Ramos components can be identified by sherds of Coles Creek Incised, var. *Mott*; Mazique Incised, var. *Kings Point*; Beldeau Incised, var. *Beldeau*; Avoyelles Punctated, var. *Avoyelles*; and Pontchartrain Check Stamped, var. *Tiger Island*. The St. Gabriel phase can be recognized by sherds of Coles Creek Incised, var. *Hardy*, Mazique Incised, var. *Manchac*, Evansville Punctated, var. *Wilkinson*, Harrison Bayou Incised, var. *Harrison Bayou*, and minor quantities of

Plaquemine Brushed, var. *Plaquemine* (Brown 1985b; Weinstein 1987b).

The latter phase is represented in the general study area by two excavated sites, Thibodaux (16AS35) and Goat Island (16SMY1). At Thibodaux, Weinstein et al. (1978:34-55) excavated a stratified shell midden along Bayou Boeuf in which one of the lower strata produced *Rangia* shell that was dated to 975 ± 60 B.P.:A.D. 975. It contained sherds of Plaquemine Brushed, var. *Plaquemine*; Mazique Incised, var. *Manchac*; and Addis Plain, var. *Addis*. At Goat Island, Goodwin et al. (1985a:108-110) received excellent St. Gabriel phase radiocarbon dates (840 ± 45 B.P.:A.D. 1110, 860 ± 130 B.P.:A.D. 1090, and 810 ± 80 B.P.:A.D. 1140) from a shell midden which produced only plain unidentified pottery.

Mississippi Period, A.D. 1200-1700

The last prehistoric period in eastern North America witnessed the development of chiefdom-level societies based on intensive cultivation of maize, beans, and squash. Perhaps the most dynamic of these societies appeared in the Middle Mississippi Valley between A.D. 900 and A.D. 1050. Referred to as Mississippian culture, it was characterized by a shell-tempered ceramic industry and a settlement pattern including large mound centers and nucleated habitation sites that were often fortified (Stoltman 1978:725). During the first centuries of the second millennium A.D., this culture spread rapidly along the major river valleys of this portion of the continent. The nature of this expansion, either by movement of people or diffusion of ideas, is still debated, but by A.D. 1200 Mississippian culture was found as far south as northern Mississippi and as far east as Georgia.

In the Lower Mississippi Valley, Mississippian culture encountered an indigenous non-Mississippian culture, and a hybridization of the two occurred. Phillips (1970) considered the resident culture to have been Plaquemine, an outgrowth of Coles Creek culture, which began about A.D. 1000. He viewed the interaction between Mississippian and Plaquemine culture as resulting in gradual changes in the Plaquemine ceramic tradition and settlement pattern. Later in the period, after A.D. 1400, an actual intrusion of Mississippian groups displaced the resident Plaquemine groups. Recently, Brain (1978) has offered a somewhat different interpretation of this sequence of events. He argues that the Lower Mississippi Valley culture that experienced the initial Mis-

sissippian contact about A.D. 1200 was Coles Creek, and that the resulting hybridization produced Plaquemine culture. The remainder of the period saw a gradual increase in Mississippian influence, at least in the Yazoo Basin, until about A.D. 1400 when a full Mississippian cultural pattern was achieved in the Lake George phase (Brain 1978:362; Williams and Brain 1983). Brain's reinterpretation of the cultural sequence has resulted in a shift in the established chronologies. Phases such as Crippen Point and Preston, which were formerly considered Plaquemine culture manifestations of the early Mississippi period, are now placed late in the Coles Creek period and assigned to a transitional Coles Creek culture. The latter now persists until A.D. 1200 and includes a number of changes in ceramic technology that had previously been considered indicators of Plaquemine culture. If Brain is correct, then Plaquemine culture throughout the Lower Mississippi Valley should postdate A.D. 1200 and presumably appear at progressively later times at increasing distance from the Yazoo Basin.

While disagreeing somewhat on the origin of Plaquemine culture, all authorities concur that it exhibited numerous continuities with the preceding Coles Creek culture. Several of the Plaquemine ceramic types appear to be direct outgrowths of Coles Creek types. There are some changes, however, including the addition of small amounts of finely ground shell and other organic matter to the pottery and the extension of the decorative field to include the body of the vessel. Mound construction continued on an even greater scale than in the previous period. The mounds became larger, there were more at each site, and there were more sites. Intensive agriculture is presumed to be the economic base on which this florescence was built, but there is presently little direct evidence of it in the Lower Mississippi Valley.

In the coastal zone of Louisiana, Gibson (16TR5) contains a well-pronounced Plaquemine ceramic assemblage (Weinstein et al. 1978), and it is highly likely that the impressive Berwick Mounds, described by Cathcart (Prichard et al. 1945), represented a major Plaquemine center. Coupled with these are smaller, isolated mounds, possibly representing minor villages in the Plaquemine political system. Sites such as Fairview Plantation Mound (16SMY148) (Collins 1927; Weinstein et al. 1978), Marmande Plantation (16TR19) (Altschul 1978; McIntire 1958) and 16TR96 (Altschul 1978:205-206), are representative of this group within the present study area. Similarly, numerous shell middens with Plaquemine com-

ponents are known throughout the region (Altschul 1978; Gibson 1978b; McIntire 1958; Weinstein et al. 1978; Weinstein and Gagliano 1985; Weinstein and Kelley 1992) and probably served as seasonal collecting locales for the residents of the more permanent mound sites.

Three regional phases of early Plaquemine culture occur to the east, west, and north of the study area (see Figure 4-1). The first of these is the Medora phase, established by Gagliano (1967) on the data supplied by Quimby (1951) from the WPA-era Medora site (16WBR1) excavations in West Baton Rouge Parish. Medora is, in fact, the type site of the entire Plaquemine culture, and typical ceramics include: Plaquemine Brushed, Coles Creek Incised, var. *Hardy*; Mazique Incised, var. *Manchac*; L'eau Noire Incised; Medora Incised; Anna Incised, vars. *Australia* and *Evangeline*; and Pontchartrain Check Stamped.

The second Barataria phase, proffered by Holley and DeMarcay (1977) for sites within the Barataria Basin, principally along bayous des Familles and Barataria, is based on excavations by the Delta Chapter of the Louisiana Archaeological Society at the Fleming site (16JE36). This phase is present in the eastern coastal zone of Louisiana, while Medora is generally located in interior areas (Kidder et al. 1995). Barataria can be distinguished from Medora by the lack of Plaquemine Brushed and the presence of Southern Cult motifs. The strongest representation of cult designs appears on pottery in the Barataria Basin (Holley and DeMarcay 1977:16; Weinstein 1987b). Other Southern Cult items include fragments of carved stone discs from the Rosedale (16IV1) and Shellhill Plantation (16SJ2) sites (Weinstein 1987c).

The third phase is Burk Hill, identified by Brown (1982) on the basis of material from the Burk Hill site (16SMY100) on Cote Blanche Island. This site was first recorded by Lanier Simmons in 1966 and revisited in 1979 during Harvard's Lower Mississippi Valley Petite Anse Project (Brown et al. 1979:30-31). The ceramics recovered (primarily Coles Creek Incised, var. *Hardy* and Plaquemine Brushed, var. *Plaquemine*) indicated occupation during a transitional Coles Creek/Plaquemine phase.

Contact Period

By A.D. 1500, new influences began to be felt in the Louisiana coastal zone, as aboriginal groups began to take on the appearance, at least in material

culture, of the peoples encountered by the early French explorers. This late Plaquemine culture is recognized by one rather overextended phase, called Delta Natchezan. Created by Phillips (1970), this phase includes all south Louisiana sites with ceramics similar to those recorded for the protohistoric and historic Natchez. The type site for this phase is Bayou Goula (16IV11), the assumed location of the historic Bayogoula, excavated during WPA days and reported on by Quimby (1957).

Principal ceramic markers of the Delta Natchezan phase include Fatherland Incised, *vars.* *Fatherland* and *Bayou Goula*, and those versions of Addis Plain that contain small amounts of shell, *vars.* *Greenville* and/or *St. Catherine* (Quimby 1957:121-128; Brain 1969; Brown 1985a; Phillips 1970; Steponaitis 1974). Mazique Incised, *var.* *Manchac* and Plaquemine Brushed may be considered minor elements in the assemblage, as well. A small spattering of shell-tempered Mississippian sherds also was noted at Bayou Goula, principally the types Mississippi Plain and Pocahontas Punctated. The presence of minority amounts of shell-tempered pottery at other Delta Natchezan sites, such as Isle Bonne (16JE60) and Fleming in the Barataria region (Holley and DeMarcay 1977; Gagliano et al. 1979), argue for a great deal of interaction between the resident Plaquemine peoples and the advancing Mississippians to the north and east.

In the study area, the presence of small amounts of shell-tempered pottery has been recorded by many investigators (Altschul 1978; Gibson 1978b; McIntire 1958:Pl. 13; Weinstein et al. 1978), and these may reflect ties not only to the Mississippian peoples of the Bayou Petre phase to the east, but to what apparently was a small enclave of Lower Valley Mississippians (the Petite Anse phase) who resided on and adjacent to Avery Island (Brown et al. 1979). It has been suggested that this group presumably came to Avery Island to exploit the salt deposits found there and to either trade or carry the salt to the north (Brown et al. 1979).

Within the study area, one Delta Natchezan component has been excavated. At the Thibodaux site (16AS35) on Bayou Boeuf, the upper two midden levels of Test Pit 1 yielded sherds of Fatherland Incised, *vars.* *Fatherland* and *Bayou Goula*; Maddox Engraved, *var.* *Emerald*; Plaquemine Brushed; and Addis Plain, *vars.* *Addis* and *Greenville* (Weinstein et al. 1978:Table 2). Radiocarbon assays on these midden levels produced dates of 515 ± 60 B.P.:A.D.

1435 and 460 ± 60 B.P.:A.D. 1490, dates whose sigmas overlap the assumed beginning of the Delta Natchezan phase.

The principal aboriginal groups encountered by European explorers in the vicinity of the study area were the Chitimacha and the Washa or Ouacha. The first recorded contact with one of these groups occurred in March of 1699 when Iberville ascended the Mississippi River (McWilliams 1981:58). One and a half leagues beyond its junction with Bayou Lafourche, which his Indian guide called the Ouacha River, he came upon two canoes, one containing four Bayagoula and the other containing five Ouacha men and two women. The latter were returning to their village, two days travel from there. La Harpe, in *The Historical Journal of the Establishment of the French in Louisiana*, states that the village was located on Bayou Lafourche near those of the Chitimacha and Yagnechitou (de La Harpe 1971:11). He also records that Bienville attempted to visit the Ouacha village in September of 1699. In that entry the village's location is given more precisely as 12 leagues down Bayou Lafourche and one quarter of a league inland (de La Harpe 1971:15). Swanton (1911:298) places it in the area of present-day Labadieville.

The next reference to the Ouacha occurs in 1718 when Penicaut notes that they moved from their former village and settled on the west bank of the Mississippi 11 leagues above New Orleans (McWilliams 1953:219). They apparently occupied, or at least controlled, the area back from the river, as well, for in 1744 Claude Joseph Villars Dubreuil purchased a large tract of land located on the west side of Lake Salvador (also called Lake Washa) from the Ouacha and an allied group the Chaouacha (Hunter et al. 1988:31). Not long after that the Ouacha seem to have disappeared as a separate tribal group.

There is considerably more documentary information on the Chitimacha, who retain their tribal identity today. Their first contact with Europeans apparently occurred in 1702, for La Harpe notes that in August of that year Bienville learned of a raid on the Chitimacha by a group of Canadians and Indians led by St. Denis (de La Harpe 1971:41). This marked the beginning of a long period of hostilities between the Chitimacha and the French. In 1706 a group of Chitimacha, having failed in an attempt to attack the Bayagoula, killed the priest St. Cosme and three other Frenchmen somewhere on the Mississippi River (de La Harpe 1971:54). Bienville

immediately asked the other Indian groups of the region to join in a war on the Chitimacha, and in March of 1707 St. Denis led a party of French Canadians, Bayagoulas, Biloxis, Chaouachas, and Natchitoches against a Chitimacha village. According to Penicaut the village was located on a lake near Bayou Lafourche (McWilliams 1953:71). He further states that 15 Chitimacha were killed and 40 were taken as prisoners.

Raids between the Chitimacha and Indian groups allied with the French continued until 1718 when Bienville made peace with the tribe, apparently at the request of Dubuisson, the manager of the French concession located on the Mississippi River at the old Bayagoula village (McWilliams 1953:216-219). Under the terms of this agreement, the Chitimacha were to abandon their village on or near Bayou Lafourche and settle on the Mississippi one league below the concession. Penicaut states that they moved to the new location two weeks later, and, in fact, maps of the period show a Chitimacha village in that area (Giardino 1984:253).

Swanton (1911) questions whether this represented the entire tribe or simply one portion of it. In 1739, a French officer with the De Nouaille party reported that the Chitimacha settlement on the Mississippi was relatively small because most of the tribe lived with the Atakapas (Swanton 1911:343). After that there are few references to the Chitimacha until the late-eighteenth century. In the 1770s Thomas Hutchins, at that time a cartographer in the British army, noted that there was a Chitimacha village located on Bayou Lafourche six leagues from its junction with the Mississippi River (Hutchins 1968:40). He also mentioned two other villages that probably represent Chitimacha settlements located on Bayou Teche. One of these, known as Mingo Luoc or Fire Chief, was situated 10 leagues above the mouth of the bayou and the other, called the village of Soulier Rouge or Red Shoes, was located three and a half leagues farther up (Hutchins 1968:46). Goodwin et al. (1985b:207) place the first village on the east side of Irish Bend and the second in the vicinity of

modern-day Charenton, the present location of the Chitimacha reservation.

By the early-nineteenth century the Charenton settlement seems to have become the principal village on Bayou Teche. The Cathcart and Landreth expedition of 1819 described it as a row of palmetto-covered cabins, each 50 to 100 yards apart extending for almost 3 mi along the bayou (Newton 1985:108). They also noted two smaller Indian settlements in this area: one a hunting and fishing camp located on Grand Lake near Charenton, and the other, known as Position's settlement, consisting of three huts located on Berwick Island on the shore of Six Mile Lake (Newton 1985:52-53; 126-127; Prichard et al. 1945:781-782, 837). The expedition recorded another Indian village, this one under the chief Jean Champlain, on Bayou Plaquemine in the eastern portion of the Atchafalaya Basin (Newton 1985:16; Prichard et al. 1945:760). Although Cathcart and Landreth do not identify it as a Chitimacha settlement, Gibson (1980:3-7), using land claims data, indicates that the occupants were Chitimacha. He also documents the presence of a second Chitimacha village of this period on nearby Bayou Jacob (Gibson 1980:7-10).

In the 1880s Gatschet conducted ethnographic research among the Chitimacha at Charenton and obtained a list of 15 historic villages (Gatschet 1883). Swanton later added to this list on the basis of his own research in 1907 and 1908 (Swanton 1911). Most of these settlements were located along Bayou Teche or on small streams in the Atchafalaya Basin, but three were situated on or near Bayou Plaquemine. Goodwin and Associates, Inc., conducted limited test excavations at an archaeological site (16SMY12) believed to represent one of the settlements recorded by Gatschet and Swanton, *Co'ktangi ha'ne hetci'nc* or "Pond-lily worship house" (Goodwin et al. 1985b:209-213). The small collection of aboriginal ceramics recovered in these excavations include a mixture of late Plaquemine and Mississippian types. Also present were six glass beads and a number of sherds of pearlware.

CHAPTER 5

HISTORIC BACKGROUND

Two studies by Gibson (1982) and Goodwin et al. (1985a) have provided excellent and detailed summaries of the history of the Atchafalaya Basin, while Beavers et al. (1984) and Brown et al. (1997, 2000) summarize the Lafourche-Terrebonne Parish region. This section, therefore, will provide only a brief overview of the present study area.

The history of European settlement of south Louisiana begins with La Salle's voyage to the mouth of the Mississippi River in 1682, and Iberville's ascent up the Mississippi River in March 1699. Although the Gulf coast area had previously been claimed for the King of Spain in the sixteenth century by Spanish explorers, their sole interest in the territory lay in its potential for providing treasure, and no attempts at colonization were made. After Iberville's initial establishment of Forts Maurepas, de la Boulaye, and St. Louis de la Mobile, France's strategy for colonization in the early eighteenth century was primarily to bestow private charters upon individuals who were allowed to develop their own lucrative schemes to draw settlers into the area. Plagued by financial troubles, internal strife, and Indian attacks, the speculative ventures of neither Antoine Crozat nor John Law were very successful in populating the colony, and Louisiana remained largely unsettled until the influx of the Acadians late in the eighteenth century.

Following the 1763 Treaty of Paris, ending the French and Indian War, France was forced to forfeit to England all of her possessions east of the Mississippi (except New Orleans). Within a year, however, both New Orleans and the lands west of the Mississippi were publicly transferred to Spain, although a secret treaty, dating back to 1762 had already provided for such an act.

In spite of the domestic furor caused by the land transfer, the change from French to Spanish control was accompanied by a productive change regarding governmental priorities for resource development. The Spanish interest in exploiting the colony's rich agricultural potential was manifest in her land grant policies, which required that the grantees build and maintain levees, bridges, roads and ditches, or else forfeit their holdings.

The earliest Europeans to visit the present-day Terrebonne Parish area were probably French trappers and, prior to 1765, few Europeans had settled there (Watkins 1939). Beginning in that year, large numbers of French-Canadian exiles arrived in Louisiana to escape British rule in Nova Scotia. Being well adapted to the environmental as well as the political climate afforded in French Louisiana, the Acadians settled the land flanking the many rivers and bayous of south-central and southwestern Louisiana. Most of them arrived in the project region

by coming down Bayou Lafourche and across to Bayou Terrebonne. This migration of Acadians continued until about 1795, under the encouragement of the Spanish who had acquired Louisiana from the French in 1763. These Acadian emigrants settled along the fertile natural levee lands along the many bayous in the area and, initially, established small farms. Soon, they spread to most of the habitable natural levee lands in the region and, in addition to farming, added stock raising, hunting, fishing and trapping. These early French settlers named the region Terrebonne, which means "the good earth," in recognition of the richness of the area. The earliest families in the project region were Marsh along Bayou Black, Bellanger on Bayou Terrebonne, Prevost on Grand Caillou, Shrivins on Petit Caillou, and Duplantis on the lower Terrebonne and Petit Caillou (Hebert 1978:xxxviii).

The Land

The first evidence of any inhabitants within the general study area come during the Spanish period and includes a coastal survey conducted by Don José Evía in 1785. Entrusted with the task of accurately mapping and recording the Gulf coast from the mouth of the Mississippi River westward to the Rio de Tampico, Evía left Southeast Pass on May 15, 1785, in two schooners, *Grande* and *Chica Besana* (Hackett 1931:352).

On the twelfth day of his survey, Evía rounded "La Ultima" (Last) Island of the Isles Dernieres and began to encounter extensive oyster beds (Hackett 1931:353-354). The following day, Evía noted:

The thirteenth day dawned cloudy, with a moderate wind from the northeast, and at noon bearings were taken in $28^{\circ} 47'$, from a point outside all the shoals. I set sail with a fresh wind from the north-northeast in 6 or 7 feet of water, in order to approach the coast. At half past six in the evening I anchored in six feet over the oyster beds, the point [of land] six miles away bearing to the north-northwest. On the 14th day I remained at anchor in order to locate all the shoals which extended to the Punta del Fierro [Hackett 1931:354].

Evía's "Punta del Fierro" is almost certainly today's Point au Fer. Later, Evía records particulars about the point and adjacent features:

From the western point of Ultima Island, the oyster banks stretch 16 miles to the south-

west, and 10 miles to the south. They can be coasted in two fathoms of water, and if the tide is out, they are visible. To the west-northwest of Ultima Island, at a distance of twelve leagues, is the Punta del Fierro, which forms the entrance to the Rio Chafalaya or Teche. It is known by a grove which is there, the only one in those parts. The coast of this point is separated from the peninsula by two small channels. The most easterly has six or seven feet of water, leading to the Gran Bayu, which has only four or five feet of water. The Punta del Fierro is surrounded by oyster banks for a distance of 10 miles. Coasting them at this distance, an eight-foot channel will be found in the direction of the north-northeast, leading to the Chafalaya, or Teche, the grove on the said point being at a distance, and visible from the mast-head. Sailing toward the east, there will be seen to the north another higher and more extensive one on the peninsula which they call La Bella Island, toward which the prow will be pointed. As soon as the water increases [in depth] one must steer closer to the wind in order to round the island of El Bastion, which is the western part of the said river. To the north of the Punta del Fierro oyster banks extend for five miles, under three and four feet of water, but after entering, there is five and six fathoms [Hackett 1931:358-359].

After examining the oyster shoals for a possible route into the Atchafalaya, Evía recorded:

. . . I determined to enter the Chafalaya, or Teche. I had been informed that I should find there good *verchas*, people, and everything necessary to enable me to carry out my commission with more exactitude, and with less risk. For these reasons I set sail at 4 o'clock in the afternoon toward the north-northeast, with a fresh wind from the south-southeast. At half past seven I moored one league inside the mouth of the river. The sixteenth day dawned with a fresh wind from the southwest and many storm clouds. I set sail before it and continued to ascend the said river toward the north-northeast, to the first settlement, which is four leagues distant from the mouth of the river. I moored here at noon.

. . . On the seventeenth day I took a pirogue and, with three mariners, ascended as far as Los Atacapas, to the house of the commandant, Don Alejandro de Declouet, which was 35 leagues from the said place. I arrived on the 19th, at

1 o'clock. . . On the third day of July, leaving the two schooners well anchored, I set sail at half past four in the morning with two pirogues and two *berchas* well armed and manned. . . . At half-past seven I was out of the river, and continued toward the west-southwest, 5° west, with a cool wind from the east, coasting La Bella Island in eight feet of water [Hackett 1931:355].

Evía eventually continued his survey west along the coast. Upon returning, however, he again entered the Atchafalaya, reclaimed his schooners, and then headed to New Orleans by way of the Atchafalaya, and apparently Bayou Plaquemine. His description of the various waterways and travels is included in the following:

Through this river (the Chafalaya), the Mississippi empties when it is swollen, by way of a bayou which they call La Fouche, opposite Manchac. This causes it to have a strong current, fresh water being encountered four leagues out to sea. To this point . . . I made this voyage with two schooners, but it being impossible to carry out the inspection of the rest of the bay of San Bernardo with them, I entered the said Rio Chafalaya in order to get pirogues and more men, which I did, leaving the two schooners there.

On my return I passed through the said bayous with them to the Rio Mississippi, by which I descended to New Orleans. The said Rio Chafalaya (it is called also Teche) is quite large and is settled for forty leagues, as far as the Atacapas and Opelusas, where there is a commandant appointed by the governor of New Orleans [Hackett 1931:359].

Although Evía mentions numerous settlements in the region, most appear to be along Bayou Teche west of the present study area. However, a map compiled by Don Juan De Langara in 1799, using the detailed charts and notes supplied by Evía, shows individual settlements along the west bank of the Atchafalaya (Figure 5-1). Two open circles are shown at locations that today would probably coincide with the town of Berwick and a point slightly to the north, possibly up the Teche. The lowermost circle is labeled "1^a Habitacion" or first habitation and probably represents the residence of Thomas Berwick, Sr., a native of Philadelphia who came to the Opelousas district in the 1760s as a surveyor (Trammell 1986:10-11). Berwick helped lay out the towns of Opelousas and New Iberia before moving to the Lower Atchafalaya River. Berwick Bay was

named for him. Thomas Berwick died in 1789, and in 1797 his wife, Eleanor, and youngest son, Joseph, were granted a tract of land on the east side of the Atchafalaya. Eleanor and Joseph Berwick's land grant was located on Tiger Island.

It is somewhat more difficult to identify the northern habitation shown on the De Langara map. Perhaps it can be related to either Peter Henry Renthrop, who, in the early 1800s, owned and operated a ferry at the junction of the Atchafalaya River and Berwick Bay, or to John Muggah, a plantation owner and innkeeper located along the Lower Atchafalaya River near today's Patterson (Prichard et al. 1945:771, 795-796). There is evidence, however, which suggests that both of these men may have been relatively recent (early 1800s) arrivals in the area, and may not have been there in 1785 (Prichard et al. 1945:771, 795).

During the late 1700s, groups of Houma Indians began moving down Bayou Lafourche from their settlements on the Mississippi River near Burnside. This tribe had previously moved to Burnside from the Baton Rouge area (via Bayou St John at New Orleans) between 1709 and 1718 (Swanton 1911:289-291). Whether the Houma displaced some of the resident Chitimacha groups on Bayou Lafourche or simply occupied an area already abandoned by the Chitimacha is not clear. However, given the fact that major Chitimacha settlements are known to have existed along bayous Teche and Plaquemine in the late eighteenth and early nineteenth centuries, it seems likely that the lands of the study area had been abandoned earlier by the Chitimacha in favor of these two locations.

The Houma settled initially along Bayou Terrebonne, principally in and around the present city of Houma. Oral tradition suggests that one main village, called Chufahouma, was established at that time (Bowman and Curry-Roper 1982:22). It is apparent, however, that the Houma were actually scattered across the region surrounding Houma. This is evident by the fact that the tribe filed a land claim with the U.S. government for "a tract of land lying on bayou Boeuf, or Black bayou, containing twelve sections" (Bowman and Curry-Roper 1982:24). Today, the claimed land is situated along that stretch of bayous Black and Boeuf between Houma and Morgan City. The claim was rejected, however, in 1814, on the grounds that an Indian tribe could not claim land that had reportedly been given them as a donation (Bowman and Curry-Roper 1982:24).

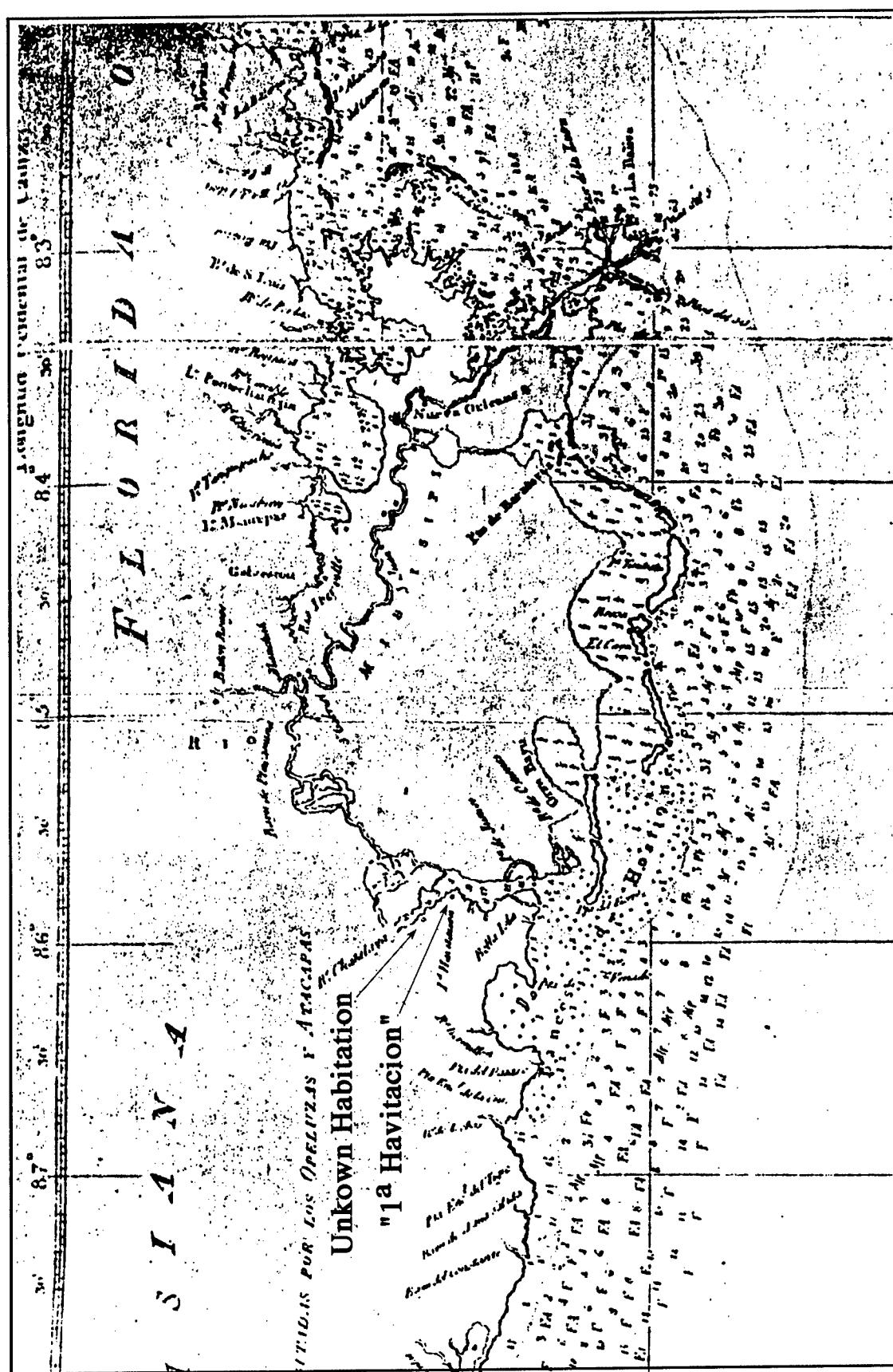


Figure 5-1. Portion of the De Langara map of 1799, based on the data recorded during Evia's survey of 1785. Note the habitations west of the Archafalaya River (after De Langara 1799, reproduced in Hackett 1931).

Additional evidence suggesting a dispersed settlement pattern comes from those land claims filed by individual Houma which were accepted by the U.S. government. Louis le Sauvage, Jean Billiot and his wife, Marie Nerisse, along with the latter's two sons, Jean, Jr., and Joseph, all were awarded land on lower Bayou Terrebonne which they had been occupying since 1787 or 1788 (Bowman and Curry-Roper 1982:24).

By the early half of the 1800s, individual Houma families or small groups of families had spread from the area around Bayou Terrebonne, east to Point Aux Chenes and west down Bayou du Large (Bowman and Curry-Roper 1982:26). The 1880 census recorded only two Indians in the fourth ward of Terrebonne Parish, but, in fact, almost four hundred "mulattoes" were actually of Native American ancestry (USPCTP 1880). In the Bayou Sale/Four Point community one hundred and twenty-nine mulattoes with the traditional Houma French names were present, notably Verdine, Billiot, Francis, Parfait, and Dion. As pointed out by Bowman and Curry-Roper (1982:27), one of the pilots hired from the Teche area by the Cathcart expedition in 1819 was named Page Bellew (Prichard et al. 1945:771), whose last name they interpret as "Billiot," a common Houma name. Similarly, Cathcart (Prichard et al. 1945:781) noted one Joe Bios (again, probably "Billiot") living at Position's settlement.

Many Houma lived below Bayou Grand Caillou along Bayou Sale and Four Points Bayou in 1880. Thomas Dion, a "mulatto" farmer resided there with his wife and three children (USPCTP 1880). Other heads of households were Alexander Fitch, Alexander Verdine, Jr., Jules Billiot, Alexander Verret, Placide Dion, Marcelline Saulco, Francois Fareot, Louis Billiot, Andrew Verdine, Etiene Gibson, Fredrik Parfait, Florentine Billiot, John Verdine, Auguste Billiot, Raymond Francis, and Louis Parfait. Each of these individuals had large households of five or more (Table 5-1). This community numbered over four hundred, with fifty percent white, forty percent "mulatto," and ten percent black. Another larger community lived at Dulac on lower Bayou Grand Caillou.

By the turn of the twentieth century, several Houma settlements were recorded. In 1907, Swanton (1911:291) noted six locations: Point au Barree, lower Point aux Chenes, Champs Charles (Champs Isle de Jean Charles), lower Bayou Lafourche, Bayou du Large, Bayou Sale, and Bayou Grand Caillou. One

of the earliest Indian settlers at Champs Isle de Jean Charles was Carlo Naquin, a Frenchman who married a Houma woman (Roy 1959). The settlement on du Large consisted of 12 to 14 houses of 84 to 98 people (Swanton 1911:291), and was centered around the present community of Theriot (Bowman and Curry-Roper 1982:29-G). By 1941, the du Large settlement had increased to 21 families, and additional Houma were living along Bayou Boeuf near Morgan City (Bowman and Curry-Roper 1982:28). Apparently, there was also an early-twentieth-century settlement on Bayou Mauvais Bois and several "cluster camps" in extreme western Terrebonne Parish (Bowman and Curry-Roper 1982:28, 29-G). Difficulties counting Indians persisted, for in 1910 the census recorded only one hundred and twenty Houma. However, by 1930 the U. S. Census had increased the number of Indians to nine hundred and thirty-six (Sultzman 2000).

Throughout the late 1700s both the population and economy of the region continued to grow, principally in relation to the clearing of the land for agricultural purposes. In 1803, this region was transferred from Spain back to France as the political situation changed through the ascent of Napoleon. However, both France's economic and political situation forced her to abandon much of her New World holdings in an effort to continue her clashes with England. Thus, later in 1803, France sold her immense Louisiana colony to the United States for \$15,000,000. Not long after this sale, Anglo-American settlers began to move into the Lower Lafourche area. Many of these individuals acquired large tracts of land and established cotton and, later, sugarcane plantations. As a result, many of the original Acadian settlers removed to more isolated and, often, marginal areas and were forced to engage in other economies, such as fishing and trapping.

Louisiana was admitted to the Union in 1812, withstood the planned British invasion in December 1814 and January 1815 during the closing moments of the War of 1812, and began to prosper as a rich agricultural state. Much of the high natural levees became the location for prosperous sugar plantations. In order to serve the expanding population, both prior to, and after, becoming a state, the region was divided into districts that, in turn, became parishes.

The study area was originally established as a part of the Lafourche District. In 1807, Assumption and Lafourche parishes were created out of the Lafourche District, and later, in 1822, Terrebonne

Table 5-1. 1880 U.S. Census Data from Bayou Sale and Four Points (After USPCTP 1880).

Name	Occupation	Relation	Sex	Status	Race	Age	Birthplace
Jules Billiot	Laborer	Self	M	M	MU	24	LA
Josephine	Keeping House	Wife	F	M	MU	17	LA
Joseph	At Home	Son	M	S	MU	3	LA
Mathile	At Home	Dau	F	S	MU	7M	LA
Florentine Billiot	Laborer	Self	M	M	MU	35	LA
Armillnes	Keeping House	Wife	F	M	MU	30	LA
Octave	Laborer	Son	M	S	MU	13	LA
Florentine	At Home	Dau	F	S	MU	10	LA
Margret	At Home	Dau	F	S	MU	8	LA
Mary Jane	At Home	Dau	F	S	MU	3	LA
Phillip	At Home	Son	M	S	MU	5M	LA
Auguste Billiot	Laborer	Self	M	M	MU	40	LA
Lizzie	Keeping House	Wife	F	M	MU	40	LA
Mary L.	At Home	Dau	F	S	MU	21	LA
Ernest	Laborer	Son	M	S	MU	23	LA
George	Laborer	Son	M	S	MU	17	LA
Elvira	At Home	Dau	F	S	MU	15	LA
Mary L.	At Home	Dau	F	S	MU	12	LA
Leon	At Home	Son	M	S	MU	8	LA
Lavise	At Home	Dau	F	S	MU	7	LA
Susan	At Home	Dau	F	S	MU	6	LA
Mathile	At Home	Dau	F	S	MU	5	LA
Henry	At Home	Son	M	S	MU	2	LA
Louis Billiot	Laborer	Self	M	M	MU	45	LA
Louisa	Keeping House	Wife	F	M	MU	31	LA
Felix	Laborer	Son	M	S	MU	18	LA
Marcell	Laborer	Son	M	S	MU	14	LA
Victor	Laborer	Son	M	S	MU	12	LA
Louisa (Infant)	At Home	Dau	F	S	MU	7	LA
John	At Home	Other	M	S	MU	8	LA
Abel	At Home	Other	M	S	MU	4	LA

Parish was created out of Lafourche Parish (Beavers et al. 1984; Goodwin et al. 1985a).

While the upper reaches of the parish received some settlers, most of lower Terrebonne remained a wilderness. Michel Theriot did not establish the first plantation on Bayou du Large until 1839. This sugar plantation would later become Theriot, the first town in Terrebonne Parish. As late as 1841, when the Robichauxs settled near Montegut on Bayou Terrebonne, the region was described as “a complete wilderness . . . and nearly all kinds of wild animals abound, deer, bear, etc.” (Becnel 1989:12-13).

Two maps from the American period, one by William Darby in 1816 (Figure 5-2) and the other by Captain Poussin in 1817 (Figure 5-3) show sparse settlement in the region. Both maps record the location of “Renthrop’s Ferry” at the junction of the Lower Atchafalaya River and Berwick Bay, and “Rice’s” along the Atchafalaya at the junction of Bayou Boeuf (see Figure 3-2 for a more accurate location of Rice’s Plantation in 1842). Poussin’s map also records “Settlements” on “B. Darbone” (Bayou Terrebonne) near the junction of “B. Buffalo” (Bayou du Large). This can only refer to the initial occupation of the Houma vicinity. Although the H.S. Tanner map of 1827 does not show property owners, the bayous Caillou appear as “Lit. Flint River” and “Gr. Flint River” in an odd combination of English and French. “Caillou” means pebble in French.

In 1819, the Cathcart expedition passed through the study area, as discussed earlier in regard to Indian site locations. The journals of the expedition provide additional information on settlements in the region at that time. As noted, several houses, including what may have been the forerunner of Hard Times Plantation, were recorded along La Coup, that section of Bayou Boeuf running roughly north-south between Bayou Chene and Lake Palourde. After turning west on Bayou Boeuf proper, Cathcart noted settlement on “Cowpen Island,” today’s Avoca Island:

Cowpen Island . . . lies South, at the entrance from La Coup to B’ou Boeuf where there is a branch . . . which runs SSE into Bayou Derbon . . . & from that to the sea, the SW branch on which we are runs into Berwick bay—Courses SW 1/4, SW 1/2, W 1/4 of a mile, to a plantation own’d by Alex’r Grassier . . . a Frenchman,

& his Father in law John Henry . . . a Dutchman . . . [Prichard et al. 1945:791].

Landreth recorded the same segment of the journey as follows:

. . . we next steer South by West about half a mile in twelve feet Water which brings us to Bayou Buff. the coup or cut through which we have passed is generally eighty yards wide and is a very handsome creek or Bayou . . . now in Bayou Buff we steer South West about half a mile in twenty seven feet water the Land very low on each side some marsh on the right hand side and branch willow no appearance of Live Oak on either side near the end of this reach on the left hand side there is a small Settlement of white people John Henry a Dutchman and Alexander Grouse a Frenchman Lives here the Bayou now bears North west by North and runs about a mile and three quarters in this direction in Eighteen feet Water . . . [Newton 1985:64].

According to Prichard et al. (1945:791, footnotes 235 and 236) the name Grassier does not appear in the *American State Papers*, but John Henry seems to have filed several land claims for property along Bayou Teche which he reportedly received under a Spanish order dated to 1786. Regardless, the location given by both Cathcart and Landreth would place the Grassier-Henry property along the south bank of Bayou Boeuf in Section 47, Township 16S, Range 13E.

After leaving Grassier and Henry, the Cathcart party followed Bayou Boeuf west to Bayou Shaffer. Cathcart noted that the western portion, at least, of “Cowpen” (Avoca) Island was claimed by Rice who lived across Bayou Shaffer on today’s Bateman Island (Prichard et al. 1945:792). No mention is made of any other inhabitants on Avoca Island, although a good bit of detail is provided on Bryant’s Plantation at present-day Morgan City, on Berwick’s Plantation at today’s Berwick, and on Renthrop’s Ferry (Prichard et al. 1945:792-796). Although technically outside the study area, it is instructive to review Cathcart’s description of Renthrop’s place, since it was probably quite typical of the small homesteads in the region. Additionally, it provides data on a small, family-run ferry, probably much like others throughout south Louisiana:

Sunday [January] 24th [1819] Remain’d here to refresh; Mr Renthrop & his Son are Taylors

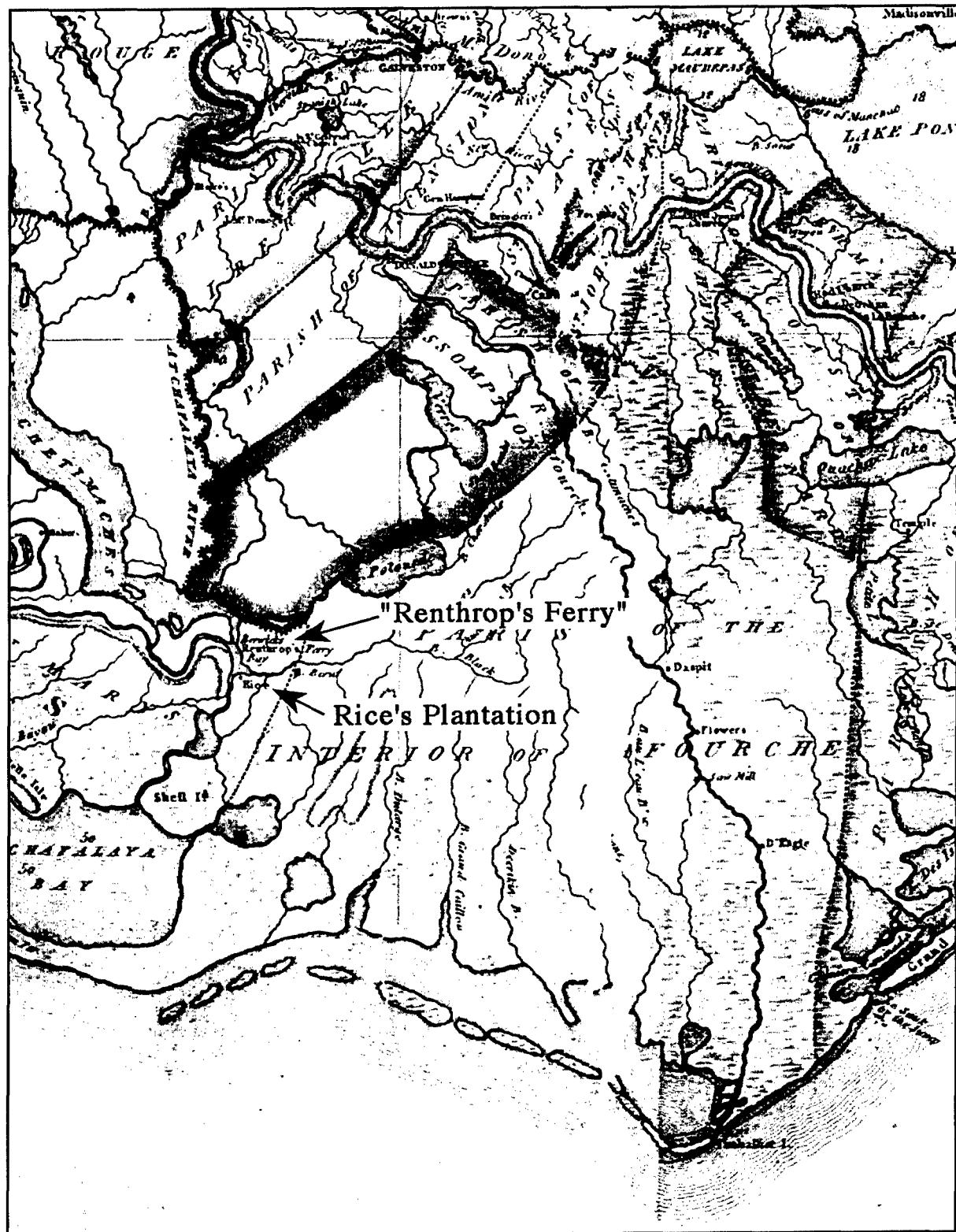


Figure 5-2. Portion of Darby's 1816 map showing "Renthrop's Ferry" and Rice's Plantation (after Darby 1816). Note the lack of settlement along Bayous Black, du Large, and Grand Caillou.

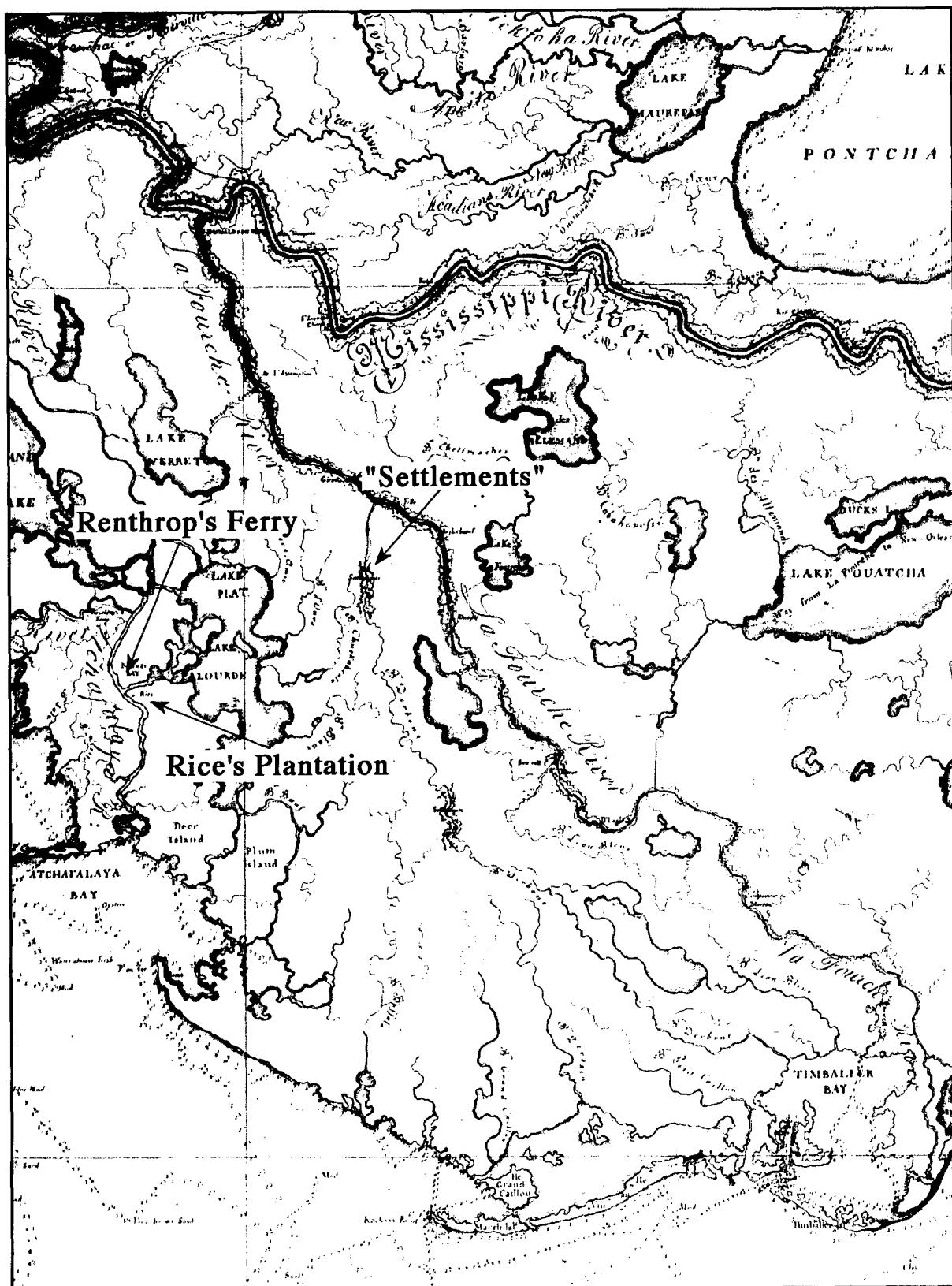


Figure 5-3. Detail of Poussin's map of 1817, showing "Settlements" around the present location of Houma, and Renthrop's Ferry and Rice's Plantation along the lower Atchafalaya River (after Poussin 1817).

natives of Westphalia, came to Philadelphia some years ago, & have traveld through many places in the United States since, & about . . . nine years ago settled upon this spot, they keep a tolerable good table for this part of the world, their beds are clean, provisions wholesome, liquors Whiskey, taffia & bad claret, they are obliging but wholly Illiterate. Their farm is not very extensive, but their garden is productive, they raise poultry & hogs in abundance, & some fine cattle, & this is the first place we have had milk with our coffee since we left New Orleans; fresh butter . . . is entirely out of the question, & salt . . . cannot be procured except in the City; hogs lard is made its substitute in all culinary purposes, the land everywhere is rich alluvion, capable of producing every necessary of life, & many of the luxuries; but owing to the prevalence of slavery, the whites are lazy, & in general dissipated, & confine themselves to the culture of cotton & sugar . . . alone, because more productive with less labour; The flats (so call'd) used at this Ferry, are form'd of two large canoes, on which is a platform for horses . . . the price of carriage for a man & horse is 12 dollars, & for black cattle 1.50 cs per head . . . they cross the Lake to the canal which runs into Lake Verrett from Lafourche . . . a distance of 30 miles, & from thence passengers proceed to Donaldsonville, & take passage in Steam boats, that pass either up or down the Mississippi, at the rate of 12 1/2 cts per mile . . . The flats or double canoes, row with two or more oars, & sail when the wind is fair, the rudder is on one canoe only, the pilot sits on the platform, & steers with a yoke & lines, as he would a gig or wherry [Prichard et al. 1945:795-796].

Landreth also added interesting information on Renthrop and his ferry:

Sunday morning January 24th 1819 at Renthropes. Renthrop is a German and has been several years in this country he keeps a tolerable good House for a new country where regular markets is not established and where supplies cannot at all times be had. here we had milk for our coffee the first we had seen for some time. here they have a great many domestic Fowls Turkeys and chickens &c here I saw what I have not seen in this country before three fine Hogs in a Sty very fat each of which would weigh two hundred and fifty pound but here [illegible] people pretends to make Bacon they generally

eat their Hog meat in what they call corn pork. Beef here being their principal dependance which they have very fine in general; Renthrop has a very excellent Kitchen Garden and even the cultivation of a few flowers is not neglected.here the[y] have cabbage full grown and in a growing State still. here they have kale and Spinnage in perfection and the finest Parsley Bed I ever Saw. the Land here is very fine the grass quite green. white clover abounds here and is at this moment fine sheep pasture; Renthrop keeps a Ferry here on the Teche. the Ferry Boats are two connoes fixed about three or four feet apart connected by a platform raised upon them upon which . . . Platform they carry Horses or cattle as I am told they either Sail or row very well and Some of them carry ten or twelve Horses at atime and they are considered safe Boats. these Boats runs from Renthropes on the Teche across the Lakes to the Lafourche canal about thirty miles the price of Ferriage for a single man four Dollars for a man and Horse twelve dollars Renthrop has a son lives at the Lafourche Canal who keeps a Tavern and Boats so that there is seldom any detention upon either side the time of passing depends upon the wind and the current &c and takes from Seven or Eight hours to twelve or fifteen. here at Renthropes we rest on Sunday-here is all kinds of business going on Carpenters at work carts driving about the same as any other Day no respect paid to the Sabath here Renthrop keeps a very good table but his charges like all the rest in this country are very high. you cannot live in any tolerable Tavern in this country for less than two Dollars per Day and seldom for that [Newton 1985:70-71].

After leaving Renthrop's, the party headed down the Atchafalaya, passing Rice's Plantation on the way. Landreth provides a brief description of the location:

. . . in the Atchafalaya we steer down through what is called Berwicks Bay South South East half East and soon get in Eight and nine feet water and from that to five fathoms we steer this course two miles which Brings us to Rices corner at the mouth of Bayou Buff from whence we take a new departure. here M' Rice owns a very fine and handsome Island which I am told he has a good Title too on which he has built himself a snug little dwelling House on Bayou Buff and open to Berwicks Bay . . . ornamented with two rows of Orange Trees running nearly down to

Berwicks Bay and paralel with Bayou Buff M' Rice has shewn more taste than common here in the arrangment of his Houses and Trees . . . [Newton 1985:70].

It is interesting to note that several of the people mentioned by Cathcart and Landreth filed land claims with the U.S. government following acquisition of the territory in 1803. These are recorded in the *American State Papers* volumes for public lands. By comparing these claims with the original township plat maps of the area, it is possible to identify quite precisely the boundaries of those claims that were upheld. Through a review of the *American State Papers* it also is possible to identify individuals who filed claims which subsequently were rejected. Although in these latter cases, the lack of corresponding locations on plat maps makes it difficult at times to identify the specific piece of property being claimed, information regarding adjacent property owners and nearby topographic features recorded in the claims can sometimes be used to pinpoint the true location. This, then, gives a more accurate picture of the total population of an area. It includes not only those residents for whom claims were validated, but also those people who may have been squatters or who did not have legitimate claims, yet were living on the land.

In the western portion of the study region, the two main stretches of land for which claims were filed include the north shore of Avoca Island, then known as "Cowpen" or "Coupene" Island, and the banks of Bayou Boeuf along La Coup. As noted earlier, Cathcart reported that Rice, whose plantation was situated at the junction of Bayou Boeuf and the Atchafalaya River, had claimed part of Avoca Island. This is confirmed by claims for Sections 30 and 40, Township 16S, Range 12E, and Sections 39, 40, and 41, Township 16S, Range 13E, filed by Samuel Rice, Sr., and Samuel Russel Rice in January 1812:

No. 346. SAMUEL RUSSEL RICE claims a tract of land, situate in the county of La Fourche, on the bayou Boeuf, containing six hundred and fifty-three and thirty-six hundredths superficial acres, and adjoining on one side land of Samuel Rice.

It appearing that the land now claimed was settled, with the permission of the proper Spanish officer, prior to the 20th day of December, 1803, and that the same was inhabited and cul-

tivated on that day by those under whom the present claimant holds, the Board confirm the claim to the quantity of six hundred and forty acres, and reject the balance.

No. 347. SAMUEL RUSSEL RICE claims a tract of land, situate on the bayou Boeuf, in the county of La Fourche, containing six hundred and fifty-five and eighty hundredths superficial acres.

It appearing that the land now claimed was settled, by the permission of the proper Spanish officer, prior to the 20th December, 1803, and that the same was actually inhabited and cultivated on that day by those under whom the present claimant holds, the Board confirm the claim to the quantity of six hundred and forty acres, and reject the balance.

No 348. SAMUEL RICE, Sen. claims a tract of land situate in the county of La Fourche, on the bayou Boeuf, at the place usually called Coupen Island, containing six hundred and ninety-four hundredths superficial acres.

It appearing that this land was actually settled, by the permission of the proper Spanish officer, prior to the 20th of December, 1803, and that the same was inhabited and cultivated on that day by those under whom the Claimant holds. Confirmed [Lowrie 1834:363-364].

Eastward, along the north side of Avoca Island, a claim was filed, also in 1812, by John Henry who is almost certainly the same John Henry, the "Dutchman," noted by Cathcart and Landreth several years later:

No. 272. JOHN HENRY claims a tract of land, situate in the county of La Fourche, on the bayou Boeuf, containing six hundred and fifty-six and forty-five hundredths superficial acres.

The claimant states that he went on this land, with the permission of the proper Spanish officer, some time in the month of July, 1803; but we have satisfactory evidence that the land was never settled until after the 20th of December, 1803, and do therefore reject the claim [Lowrie 1834:365].

Several years later one Robert Martin filed claims for land on both Avoca and Tiger islands. One of

his claims appears to correspond to that of John Henry, whose claim, as just seen, was rejected. Martin, in particular, claimed Sections 43, 45, and 47 on the north shore of Avoca Island, and Sections 42, 44, and 46 on the south shore of Tiger Island, all within Township 16S, Range 13E:

No. 33. Robert Martin claims a tract of land, situate on the bayou Boeuf, in the county of Lafourche, having a front of forty arpents on said bayou, with a depth of forty arpents, bounded above by land of Pilboro, and below by vacant land.

This land is claimed by purchase under François Flores, in whose favor an order of survey was made by Governor Galvez on the 7th of August, 1777. I am of opinion this claim ought to be confirmed . . .

No. 35. Robert Martin claims a tract of land, situate on the bayou Boeuf, in the county of Lafourche, having a front of forty arpents on both sides of said bayou, with a depth of forty arpents, bounded above by lands of Montaran; and below by lands of Dumain.

This land is claimed by right of purchase under Antoine Pilboro, in whose favor an order of survey was made by Governor Galvez on the 2d day of July 1776. I am of opinion this claim ought to be confirmed.

No. 36. Robert Martin claims a tract of land, situate in the interior of Lafourche, on the bayou Boeuf, having a front of thirty arpents on both sides of said bayou, with the ordinary depth of forty arpents, bounded above and below by public lands.

This land is claimed by right of purchase under Jacques Montaran, in whose favor an order of survey was made by Governor Galvez on the 5th of May, 1775. I am of opinion this claim ought to be confirmed [Lowrie and Franklin 1834:581].

Interestingly, questions apparently were raised shortly thereafter concerning the authenticity of Martin's claims. A letter from Samuel H. Harper, of the New Orleans Register's office, to William H. Crawford, Secretary of the U.S. Treasury, dated March 9, 1821, notes the following:

SIR: In my report on land claims, dated 6th of January last, which I had the honor of transmitting to you, I reported favorably on the following claims, which I have since discovered to be forgeries, viz: Nos. 24, 33, 34, 35, 36, 37, 65, 66, and 67. These claims purport to be founded on orders of survey granted by Governors Miro, Guyoso, Galves, and Carondelet. At the time I received these claims I was much pressed with the business of other claimants; and, besides, they were presented by persons of so respectable characters, to whom they had been transmitted for the purpose, that I did not suspect any fraud was intended; and thus, without minute investigation, I reported in their favor. But since arranging and recording the various land titles presented, I have discovered that the whole of the claims above mentioned are feigned and fraudulent. From a comparison of signatures, and other circumstances connected with the papers, I had no doubt myself of their being forged; but, lest I might be mistaken, I have submitted them to the inspection of several persons, and particularly to former clerks of those governors, who have all concurred in their condemnation. I had always been extremely scrupulous with regard to receiving land titles, and, from the length of time I have been in office, I cannot well be deceived in signatures, several of which I detected on presentation; but, for the reasons above mentioned, I did not bestow the proper attention upon those. I hope, however, that, even if those reports of mine have been adopted by Congress, those spurious claims may be still corrected. So far from wishing them sanctioned, I am determined to prosecute the persons concerned in this nefarious transaction, if, in the opinion of the Attorney General, prosecution can be maintained. Since discovering the frauds practiced on me, I have examined minutely with the translator (who, by-the-by, was not present when these papers were received) every other claim reported on, none of which I have any reason to suspect.

I have the honor to be your obedient servant,

SAM. H. HARPER
[Dickens and Forney 1860:436].

Harper's reluctance to accept Martin's claims may be supported to some extent by the Cathcart

and Landreth journals, neither of which mention Robert Martin, a name which surely would have been noted had Martin owned or occupied all of the land in question. Apparently, as seen above, Harper's letter did not reach the Secretary of the Treasury in time to prevent Congress' approval, and the claims were, thus, duly included in Lowrie and Franklin's (1834) volume of the *American State Papers*.

Nevertheless, questions regarding the authenticity of the claims remained throughout the early 1800s. This is particularly evident on the original plat map for Township 16S, Range 13E (Newcomb 1842). The plat includes both American survey sections (solid lines) and earlier Spanish (arpent) sections representing Martin's claims (dashed lines). A note on the map states the following:

The claims of Robert Martin are represented on this map by dotted lines in conformity with commissioners Letter of . . . Mch . . . See Letter of S. H. Harper, Register dated 9th Mch 18 . . . to the Secretary of the Treasury, asserting the claims to be forgeries [Newcomb 1842].

Either Martin or his heirs must have continued to press for confirmation of the claims, however, and eventually gained their approval, for by 1850 the claims were resurveyed and made an official part of the township. The section lines on today's quadrangle maps match those of Martin's original claims.

Along La Coup, two land claims were confirmed, one by Gregoire Aucoin for Section 37, and one for Jean Baptiste Henry for Section 38, both in Township 16S, Range 13E (Newcomb 1842). The claims are on the east bank of Bayou Boeuf and almost certainly reflect at least two of the inhabitants of that stretch of La Coup noted by Cathcart and Landreth. The names of additional residents along La Coup can be gleaned by further examination of the Aucoin and Henry claims submitted in January 1812:

No. 279. Gregoire Aucoin claims a tract of land, situate on the bayou Boeuf, in the country of La Fourche, containing four hundred and forty-six and sixty-two hundredths superficial acres, and adjoining on one side to land of Francois Aucoin.

It appears that the land was actually settled, by permission of the proper Spanish officer, prior to the 20th of December, 1803, and that the same was inhabited and cultivated on that day. Confirmed.

No. 280. Jean Baptiste Henry claims a tract of land, situate in the county of La Fourche, on the bayou Boeuf, containing one hundred and eighty-six and sixty-eight hundredths superficial acres, and adjoining on one side to land of Jean Baptiste Jaunier.

It appearing that the land now claimed was actually settled, with the permission of the proper Spanish officer, prior to the 20th December, 1803, and that the same was inhabited and cultivated on that day. Confirmed [Lowrie 1834:363-364].

Thus, Francois Aucoin and Jean Baptiste Jaunier occupied land adjacent to Aucoin and Henry. A search of the *American State Papers* shows that Francois Aucoin's claim (No. 273) was rejected, and a claim (No. 491) filed for land along Bayou Boeuf by Jean Baptiste Janne, who may be the Jean Baptiste Jaunier noted in the Henry claim, also was rejected (Lowrie 1834:365, 367). Other claimants filing for land along Bayou Boeuf had their claims rejected. These include Benoit Goutreau (Claim No. 282), who claimed land adjacent to Jean Baptiste Henry, Michel Deval (Claim No. 294), Jacob Henry (Claim No. 337), William Knight (Claim No. 462), Alexandre Daniel (Claim No. 488), Jean Lagrange (Claim No. 489), who claimed land adjacent to "Bte. Jaunier" (Jean Baptiste Jaunier?), Jean Olivier (Claim No. 490), Etienne Penicon (Claim No. 493), who claimed land adjacent to Jean Baptiste Henry, and Felix Boudreau (Claim No. 494) (Lowrie 1834:364-367). A joint claim filed by Gregoire Aucoin and Benoit Goutreau (Claim No. 483) was rejected, although, as noted above, Aucoin had a claim approved for another tract of land on Bayou Boeuf (Lowrie 1834:366-367).

The only claim to be approved along Bayou Black in the northern portion of the study area was filed by Robert Martin for a tract located near Houma that includes Section 95 in Township 17S, Range 16E and Sections 103 and 104 in Township 17S, Range 17E (Figure 5-4):

No. 34. Robert Martin claims a tract of land, situated on the bayou Blake, in the county of Lafourche, having a front of fifty arpents on both sides of said bayou, with a depth of forty arpents.

This land is claimed by purchase under Miguel Saturnino, in whose favor an order of survey was made by Governor Gayoso on the 2d of November, 1798. I am of opinion this claim ought to be confirmed [Lowrie and Franklin 1834:581].

Houma Navigation Canal Deepening Project

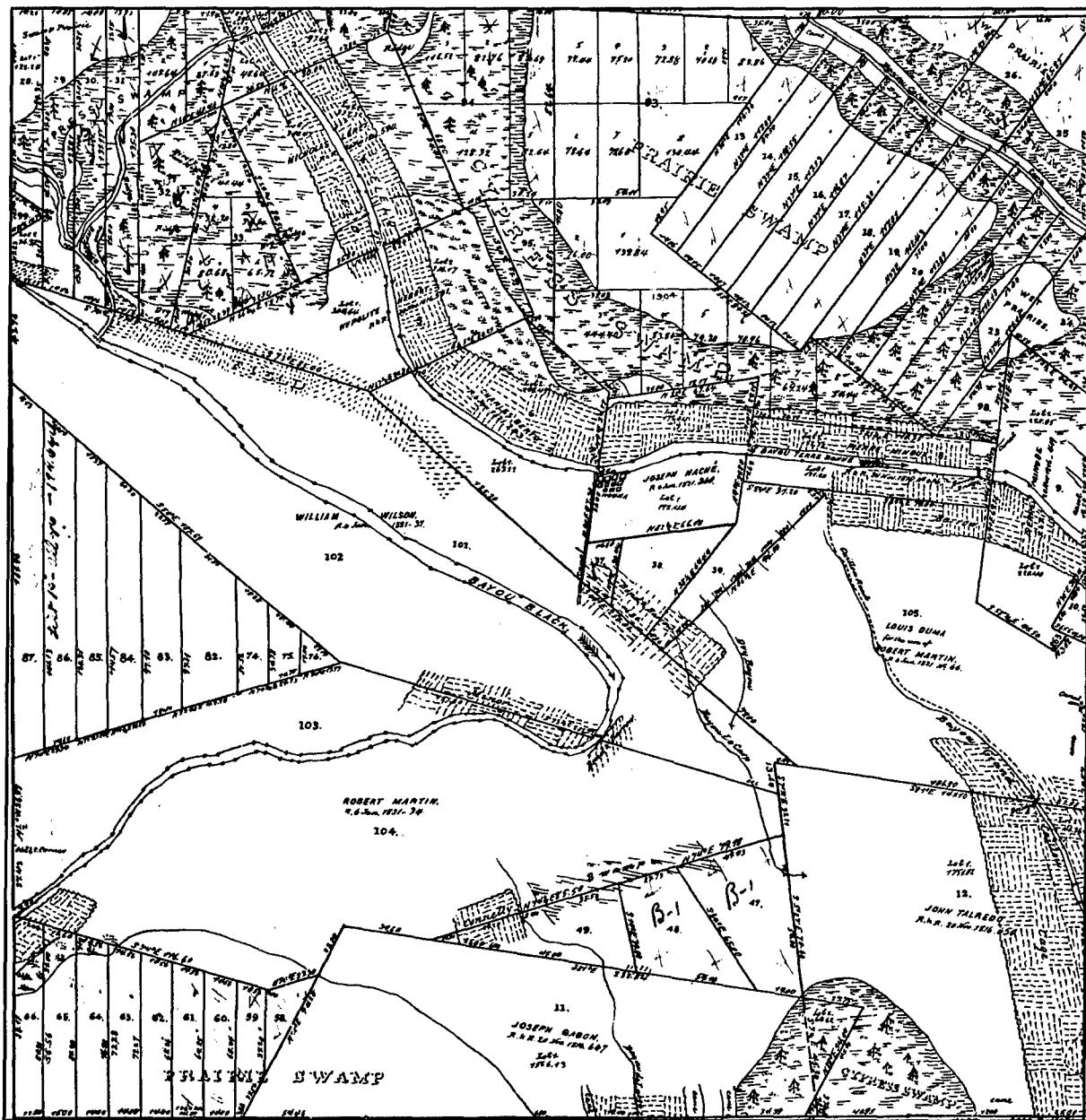


Figure 5-4. Plat map of Township 17 South Range 17 East showing Robert Martin's claim on Bayou Black (McCulloh 1855).

This is the same Robert Martin who submitted the apparently forged claims along Bayou Boeuf. His claim No. 34, for the land along Bayou Black and the upper end of Bayou du Large, was considered fraudulent as well (see Harper's letter of March 9, 1821). As with his other claims, however, Martin or his successors eventually were able to receive confirmation. Political clout may have played some part in these confirmations as Martin served as a State representative for Terrebonne Parish in 1846, 1848,

and 1852 through 1853 (Watkins 1939:51-52). Martin eventually transferred this tract to William C. C. Martin, who sold it to James Bowie on May 21, 1827 for four thousand dollars (Terrebonne Parish Conveyance Records D154 and D155).

Interestingly, the Houma tribal claim mentioned previously was one of the few other claims filed along this portion of Bayou Black. Although it was disallowed by the U.S. Land Commission, the absence

of other claims for this land lends some support to the argument that the Houma were residing there at that time.

In the eastern part of the study area, only two land grants, all along the upper reaches of Bayou du Large, were approved. These are extremely interesting, however, as they almost certainly represent a modified form of the Spanish sitio, measuring approximately one league on each side (Mires 1986:7). One of the sitios is located entirely within Townships 18S, Range 17E, comprises Sections 18 and 31, and was claimed in 1817 by Joseph Felice (Figure 5-5):

No. 648. Joseph Felice claims a tract of land, situate in the county of Lafourche, on bayou Boeuf, having a front of one league on each side of said bayou, and a depth of forty arpents on each side of the bayou. The claimant, on the 29th of December, 1794, obtained from the Baron de Carondelet an order of survey for this land, but there is no evidence of location. Our opinion with respect to this claim is the same with that expressed in the proceeding, at No. 647 [Lowrie and Franklin 1834:267].

The location of the claim on Bayou Boeuf, rather than du Large, must simply be a “best guess,” stemming from the fact that the order of survey did not specify the claim’s exact location. The 1832 plat map of the township (Fritz 1832) shows Felice’s claim (No. 648) properly on Bayou du Large.

The other sitio is noted in claim No. 647 and represents Sections 17 and 32 in Township 18S, Range 17E, and Section 11 in Township 17S, Range 17E. It was filed by Joseph Gabon in 1817 (see Figure 5-5):

No. 647. Joseph Gabon claims a tract of land lying and being on bayou Boeuf, county of Lafourche, containing eighty arpents front on each side of said bayou, by forty arpents in depth on each side of the same. The claimant obtained from the Baron de Carondelet, on the 5th of November, 1794, a regular order of survey for the above quantity of land, but we have no evidence of its ever having been located, although we think it probable. If this claim has not been located, and the place designated in the order of survey be still vacant, we are of opinion that the claimant ought, in justice, to have the land claimed [Lowrie and Franklin 1834:267].

Again the description of the claim on Bayou Boeuf is questionable, but, as noted, the poor locational information in the order of survey probably explains the discrepancy. As with Felice’s claim, the proper location on Bayou du Large is shown on the two relevant township plats (Fritz 1832; McCulloh 1855).

Other early claimants along bayous du Large and Grand Caillou prior to 1840 were:

Joseph Talbo	T18S, R17E Section 2, 11, 79
Joseph Felice	T18S, R17E Section 18, 31
Edmund Fongg	T18S, R17E Section 44, 3, 10, 12
George Toups	T18S, R17E Section 45, 4, 9, 14
Charles Jumoville Devilliers	T18S, R17E Section 6 and 7; T19S, R17E Section 1
Guillaume Terrebonne	T19S, R17E Section 2
Pedro Gonzales	T19S, R17E Section 19
Jacques Lambez	T19S, R17E Section 85
John Charles Terrio	T19S, R17E Section 86
Louis Cossier	T19S, R17E Section 87; T20S, R17E Section 37

Joseph Talbo settled the land along Bayou Grand Caillou as early as 1794 when he received a grant from Governor Hector Carondelet of one league in length along the bayou with depths on each side of forty arpents (see Figure 5-5). This was essentially a league square. Talbo was growing sugarcane along both sides of the bayou by 1816 (McCulloh 1855), as eventually would most of his neighbors between Black and Four Points bayous (Terrebonne’s 150th 1972). John Charles Terrio’s tract, just south of the modern Falgout Canal, would become the heart of Dulac (Figure 5-6). The southernmost claim in the project area was that of Louis Cossier on Bayous Grand Caillou and du Large (see Figures 5-6 and 5-7).

The sugar boom at the end of the 1820s brought an influx of Americans into the region. The Lafourche Gazette reported in 1827 that “Upwards of fifty thousand dollars worth of wood lands on the Bayous Caillou, Black, etc., in the vicinity of the La Fourche, have been purchased during the past week by planters in the neighborhood of Natchez, for the purpose of being employed in the cultivation of sugar cane.” (Tregle 1942:54). The population of Terrebonne Parish more than doubled from approximately 2,000 people in 1822 to 4,410 by 1840. The number of inhabitants had tripled to 12,091 by 1860, 56 percent of whom were slaves (Watkins 1939:53-54).

During the 1830s and 1840s sugar cane cultivation came to dominate the region. Terrebonne

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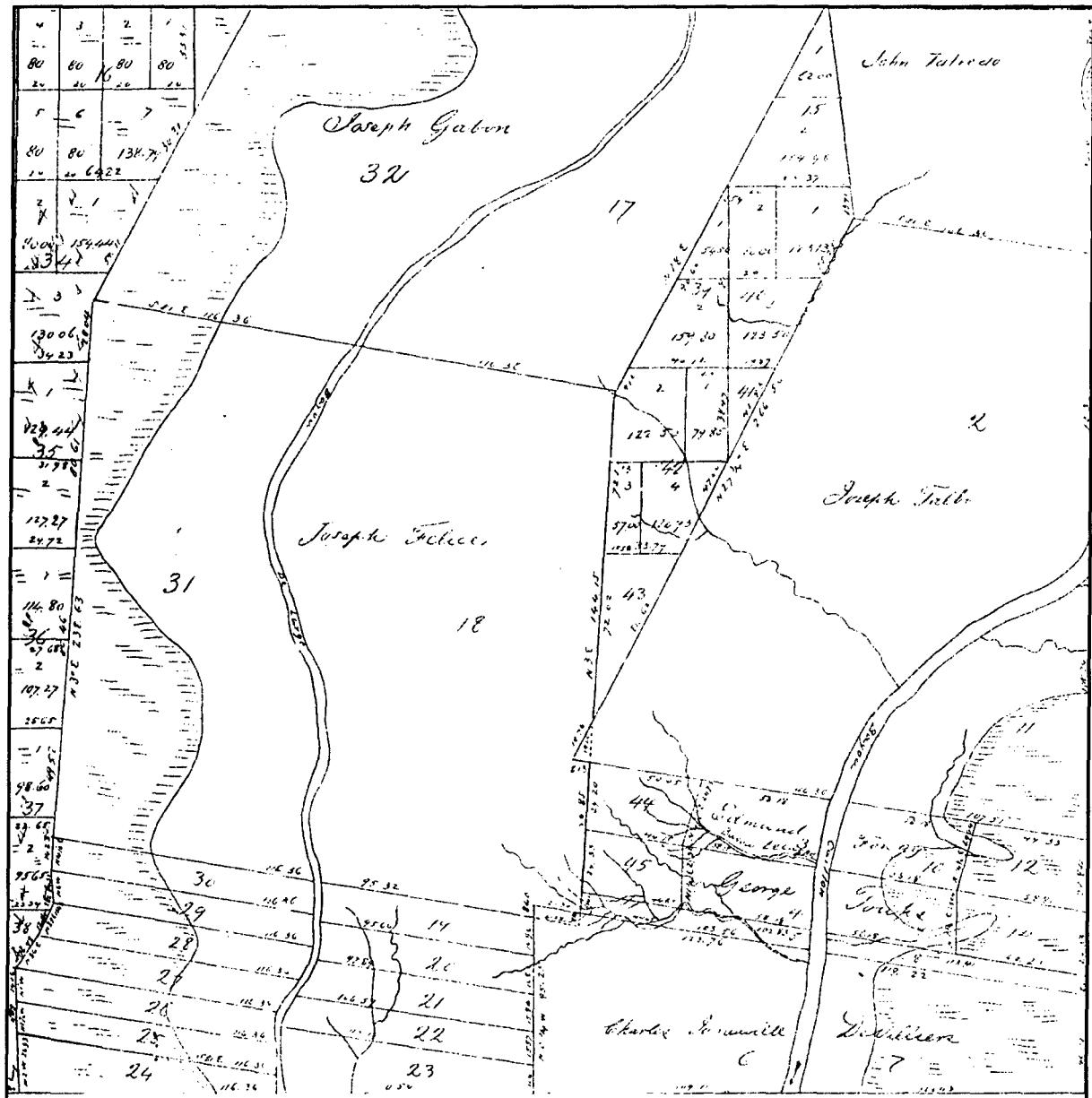


Figure 5-5. Plat map of Township 18 South Range 17 East showing the claims of Joseph Gabon, Joseph Felice, Joseph Talbo, and Charles Jumonville Devilliers (partial) on Bayous du Large and Grand Caillou (Righton 1831).

ranked seventh among the parishes in sugar production in 1844 and boasted 33 steam- and 10 horse-powered mills. Just a year later Terrebonne ranked sixth in the state and the number of mills in operation had almost doubled. The parish dropped to eighth place in 1849 even though the amount of sugar produced had actually increased, and the number of mills grown to 92 (Watkins 1939:89-90).

In the midst of such enormous economic growth, it is not surprising that by the 1840s almost all of the

original land grants in the project region had changed ownership. An 1846 map by John La Tourette, showing many of the landowners in the state of Louisiana, includes only S. R. Rice as the owner of the principal Rice property on Bateman Island west of Bayou Shaffer (Figure 5-8). This may confirm Samuel Harper's earlier fears, brought out partly in a letter dated May 24, 1827, to George Graham, Commissioner of the General Land Office, that many of the initial land claimants, including Robert Martin, were simply attempting to acquire land for speculation:

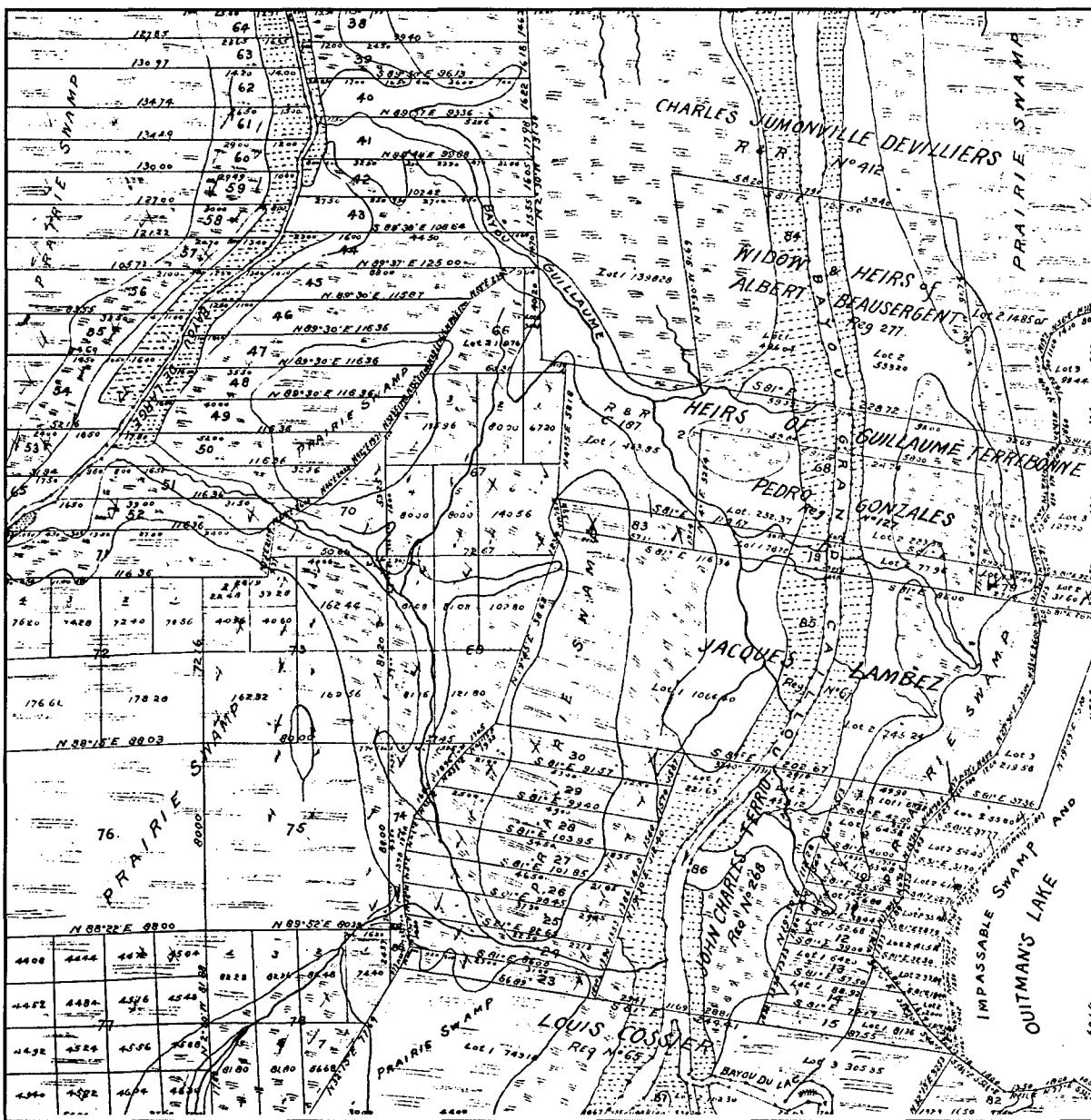


Figure 5-6. Plat map of Township 19 South Range 17 East showing the claims of Charles Jumonville Devilliers (partial), Guilliam Terrebonne, Pedro Gonzales, Jaques Lambez, Charles Terrio, and Louis Cossier (partial) on Bayou Grand Caillou (McCulloh 1856a).

I have been lately informed that some of the persons concerned in those claims (with a view, no doubt, to induce people to buy them) have said that positive orders had been given by "the department" to the surveyor general to survey those lands, and that the surveys had been returned to my office. The first of these statements I do not believe, and the latter I know to be false. Not knowing what extraordinary measures may be taken to procure patents, I think proper to apprise you that I have not, nor will

not, issue patent certificates for those lands without your express order, or unless I shall be compelled so to do by judicial authority [Dickens and Forney 1860:437].

With final confirmation of such claims, the land was quickly sold to new individuals.

Of particular interest are those lands along the north edge of Avoca Island, the east bank of La Coup, and Bayou du Large. On Avoca Island, Section 30,

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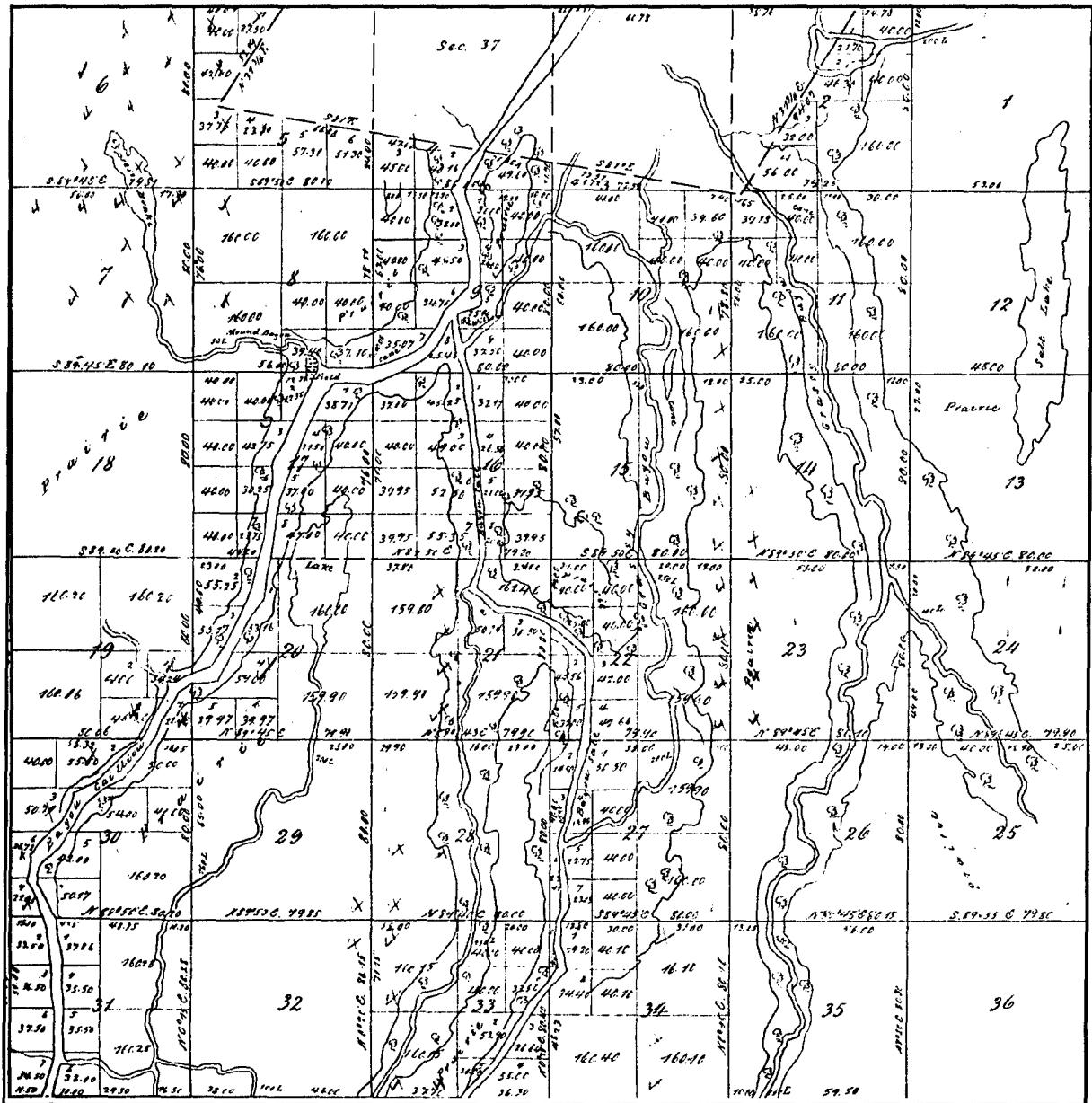


Figure 5-7. Plat map of Township 20 South Range 17 East showing the claim of Louis Cossier (partial) on Bayou Grand Caillou (McCulloh 1856b).

Township 16S, Range 12E, is owned by J. N. Wofford, while Sections 39, 40, and 41 in Township 16S, Range 13E are owned by William Rochelle. These were original land grants awarded to Samuel Russel Rice and Samuel Rice, Sr. William Washington Wofford acquired the land from the elder Rice in 1825. By 1843, it had passed into the hands of James Nixon Wofford who retained it until 1868. The Woffords established a small sugar plantation on the property and built a sugar mill along Bayou Shaffer about 0.25 mi south of the bayou's junction with Bayou

Boeuf (Kelley 1988:39-44). The earliest sugar records available, dating to 1828 and 1829 (Degelos 1892), do not list either Wofford or Rochelle. There is a gap of 14 years, however, before the next set of sugar records, from 1844, are recorded. These list J. N. Wofford as having produced 142 hogsheads (Hhds) of sugar that year, and William Rochelle as having produced 122 Hhds (Champomier 1845).

On the east bank of La Coup, La Tourette (1846) recorded the landholdings of Pennison, Bourg, Daniel

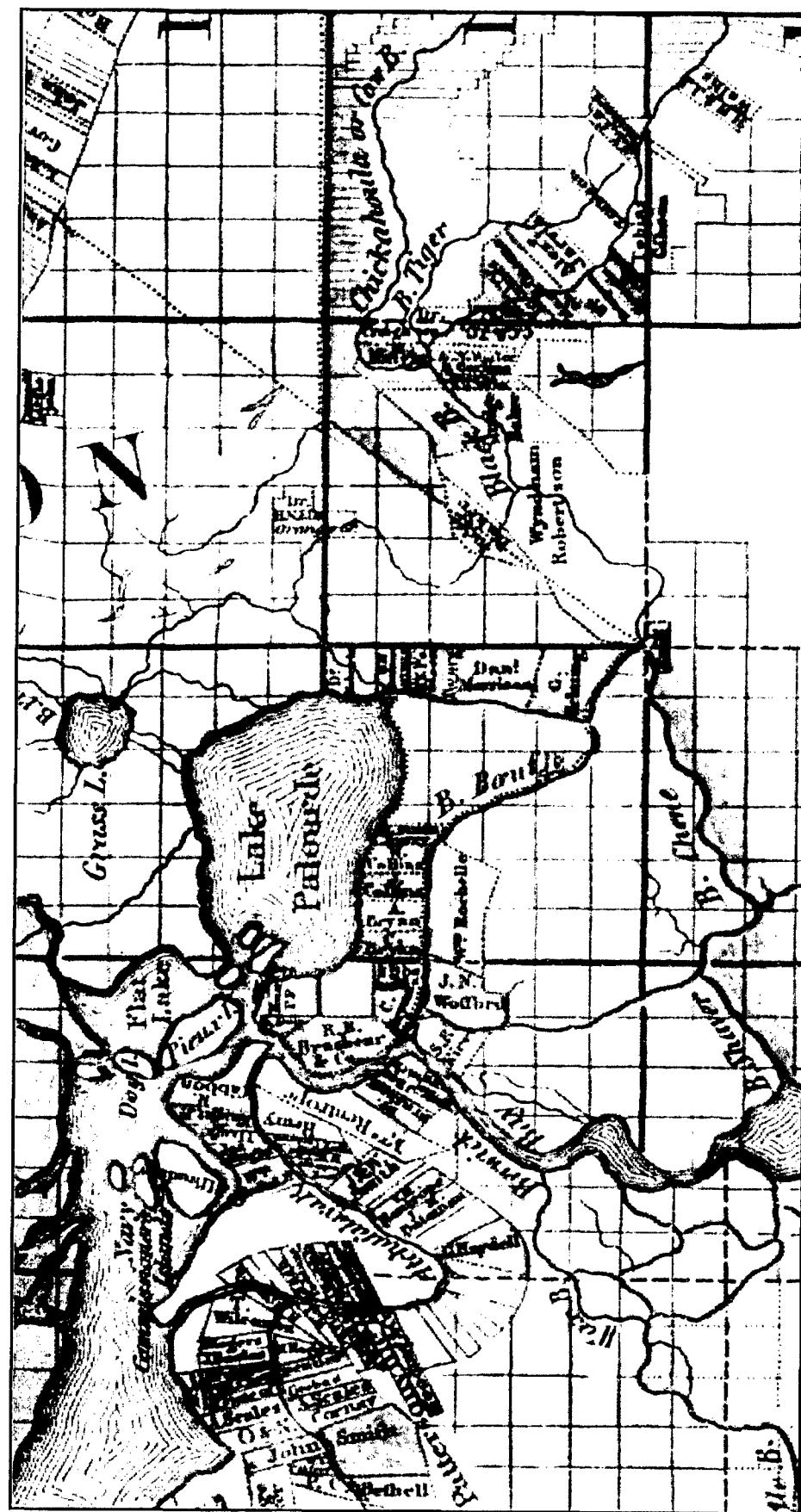


Figure 5-8. Detail of the La Tourette map of 1846, showing principal landowners west of Bayou Black (La Tourette 1846).

Morrison, and Schwing. Pennison probably refers to B. E. Pennison, apparently the son of Etienne "Penicon" who had placed a land claim in 1812 which was subsequently rejected (see above). Apparently, following the township survey in 1842, all unclaimed, non-swamp land became available for purchase, and a parcel was acquired by Pennison. "Schwing" is undoubtedly George Schwing who, in 1832, had built the Hard Times Plantation house (16AS34) reported upon earlier.

Both B. E. Pennison and Morrison and Schwing had acquired their properties by 1844 when the sugar records indicate that Pennison produced a moderate amount of sugar, at 78 Hhds, while Morrison and Schwing accounted for 214 and 149 Hhds, respectively (Champomier 1845). Schwing's sugar production actually is referred to as that of "Schwing & Co." (Champomier 1845), so it is likely several partners were involved in operation of the plantation. It also is interesting to note that the 1844 sugar records record the production of "Gautreau & Aucoin" on Bayou Boeuf. It seems likely that these are the same Gregoire Aucoin and Benoit Goutreau (or their children) whose claim for land along Bayou Boeuf had earlier been rejected. Their names do not appear, however, on the La Tourette map.

At the junction of bayous Chene and Black, along the south bank of Chene, portions of Sections 1 and 6 of Township 17S, Ranges 13 and 14E, respectively, are shown as property of J. Earl. This name does not appear in any of the sugar records for 1844, '45, or '46 (Champomier 1845, 1846, 1849), so Earl may have been a hunter, trapper, or fisherman, a possibility substantiated by the relatively low land he has acquired.

La Tourette (1846) records the presence of a number of small landholdings and a few larger tracts along Bayou Black at the northern boundary of the study area (Figure 5-9). Most of these properties were located on the western portion of the bayou in Ranges 14 and 15 East. The large tracts, which belonged to Windham Robertson, Judge Joshua Baker, and Tobias Gibson, all supported productive sugar plantations by the late 1840s, and many of the smaller properties were producing sugar as well (Champomier 1846). Farther east along Bayou Black most of the land apparently remained undeveloped.

On the 1846 map by John La Tourette, John Martin's questionable claim to Sections 103 and 104 (T17S, R17E), near the junction of bayous du Large and Black, have been divided into the properties of

Bond & Barrow, John Boykin, John McCrea, Bernard, and Dr. E.E. Kitteridge & G.F. Connolly (see Figures 5-4 and 5-9). The latter pair had also acquired the northern portion of Joseph Gabon's large sitio claim (Section 11, T17S, R17E), as well as the previously vacant Sections 47, 48, and 49 (T17S, R17E) (see Figures 5-4, 5-5, and 5-9). Barrow and Kitteridge and Connolly had acquired their tracts by 1844 and Boykins by 1847, according to the sugar records. No McCrea or Bernard appear in the records at all. The cane fields belonging to Bond & Barrow and Mr. Connolly are depicted on the 1855 plat map (T17S, R17E) (see Figure 5-4).

Robert Ruffin Barrow of J.B. Bond & Barrow was an Anglo-American planter who moved to Terrebonne Parish in the late 1820s from West Feliciana Parish where his family owned a number of large plantations (Floyd 1963:24). He quickly began acquiring land in Terrebonne Parish, some of it by rather unscrupulous means. Barrow filed several fraudulent claims for lands inhabited by Houma Indians (Bowman and Curry-Roper 1982:27), and purchased land from Robert Martin who had apparently acquired it illegally. Barrow's conflicts with the Houma reportedly led to his killing of several members of the tribe (Floyd 1963:24). He lived at Residence Plantation east of Houma on Bayou Terrebonne, but by the mid-1840s he owned or was a partner in five other plantations in Terrebonne Parish and one in Lafourche Parish, producing a total of over 1,500 Hhds of sugar per year (Champomier 1846). Barrow was by far the largest sugar producer in Terrebonne Parish, and by 1860 he had become one of the wealthiest planters in the state with property valued at over \$1,062,000 (Floyd 1963:24).

Bond and Barrow's tract on Black Bayou was eventually called Crescent Plantation (see Figure 5-9). It produced 445 Hhds of sugar in 1844, and 400 in both 1845-6 and 1849-50. By 1850-51 he used a steam-powered mill to yield 440 Hhds. Between 1852 and 1856 this tract produced between 420 to 720 Hhds of sugar a season. 1856-57 and 1857-58 were both bad years with just 140 Hhds of sugar, and 270 (90 burnt), respectively. Too much rain and killing frosts were to blame in 1856-57 (Watkins 1939:91) and fire in 1857-58. However by the 1858-59 season, production was back up to 400 Hhds, with an increase to 507 Hhds in 1861-62 (Champomier 1845-1846, 1850-1859; L. Bouchereau 1869).

John Boykin's plantation on the old Martin claim, Nameoka, raised 168 Hhds of sugar in 1849-50 (see

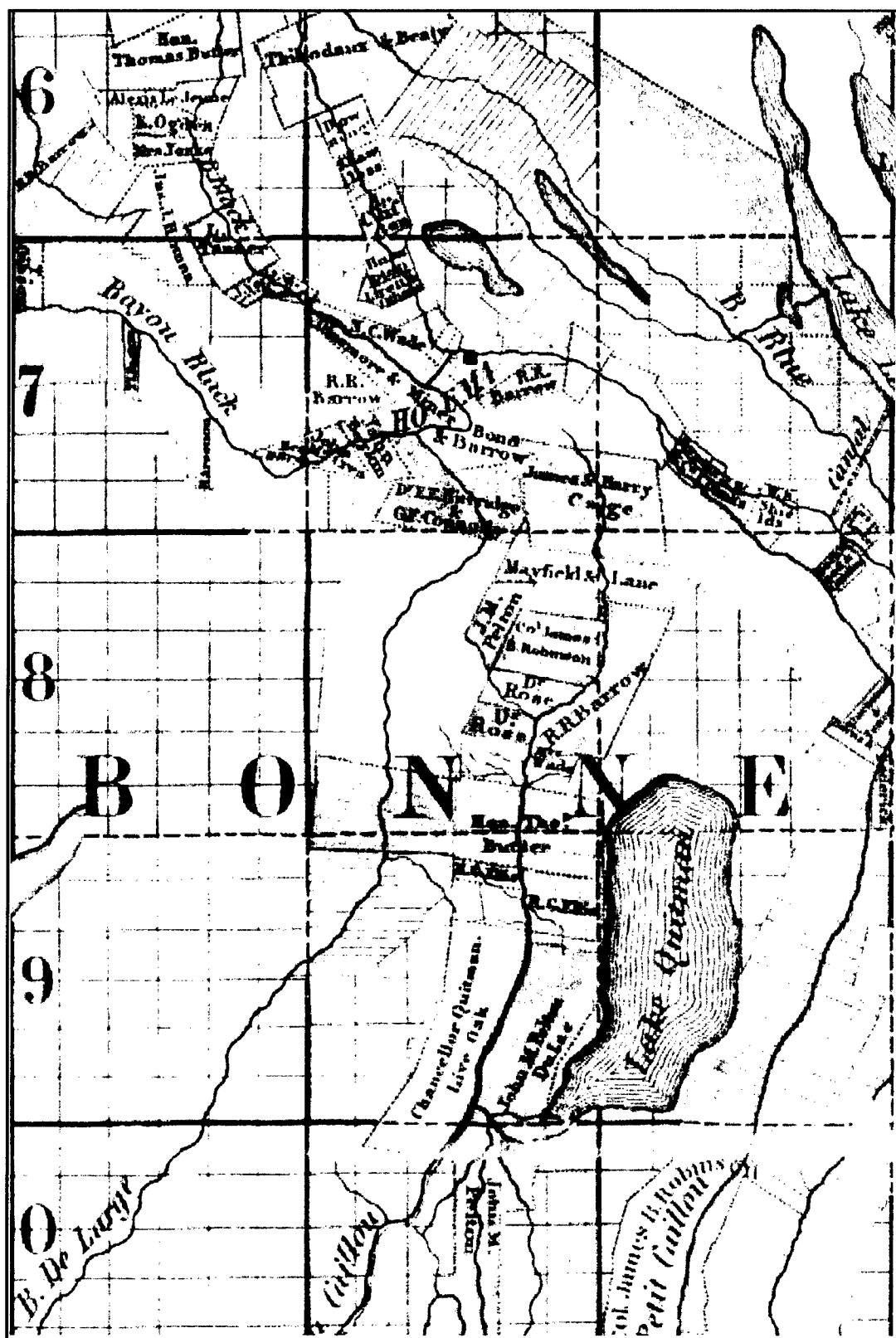


Figure 5-9. Detail of the La Tourette map of 1846, showing principal landowners on Bayous du Large and Grand Caillou and the eastern end of Bayou Black (La Tourette 1846).

Figures 5-4 and 5-9). The following season he and a partner, Lang, used a steam-powered mill to turn out 250 Hhds. Boyd & Lang went on to produce 270 Hhds in both 1851-52 and 1852-53. Production then ranged from 215 to 425 Hhds between 1854 and 1862, excluding the bad season of 1856-57 when just 57 Hhds were raised. The Boykin in the partnership changed to E.M. Boykin in 1851 (Champomier 1850-1859; L. Bouchereau 1869).

E.E. Kitteridge, along with Robert Martin, represented his parish in state government in 1853. He served again the next year with J.B. Key (Watkins 1939-51-52). Kitteridge and J.R. Connolly raised 268 Hhds of sugar in 1844, 429 in 1845-46, and 240 in 1849-50 when they called their property Bayou Large (see Figure 5-4 and 5-9). This partnership then disappears from the sugar records (Champomier 1845-1846, 1850).

The lower portion of Gabon's original claim (Section 11, T17S, R17E) is shown as unoccupied in 1853, as are Sections 18 and 31 (T18S, R17E), Joseph Felice's former property (see Figures 5-5 and 5-9). Mayfield & Lane, Col. James, E. Robinson, Dr. Rose, and R.R. Barrow were the new owners of Joseph Talbo's Section 2 (T18S, R17E). J. M. Pelton had acquired most of Section 39, all of 40 and 41, and part of 42 (T18S, R17E), all previously unclaimed (see Figures 5-5 and 5-9). Mr. Pelton's property is labeled as "Turner & Pelton's Plantation" on G.W. Hughes' 1842 "Map of a Military Reconnaissance and Survey of the approaches to New Orleans from the Gulf of Mexico" (Figure 5-10).

Mayfield & J.A. Lane were producing sugar on their tract, called Ashland Plantation, by the 1849-50 season, which yielded 190 Hhds. The next year's yield using a steam-powered mill was 165 Hhds. The average crop between 1851 and 1858 was 258 Hhds, excluding the bad season 1856-57 when just 50 Hhds of sugar were produced. Mayfield was the sole owner of the plantation by 1856. Duncan S. Cage had acquired Ashland by the 1858-59 season and raised 417 Hhds of sugar. His yield had increased to 515 Hhds in 1861-62 (Champomier 1850-1859; L. Bouchereau 1869).

Col. James E. Robinson does not appear in the sugar records until 1858-59 with a yield of 250 Hhds on his Cedar Grove Plantation. His name on the 1846 La Tourette map suggests that he may have owned the property for several years prior to growing any sugar (see Figure 5-9). In 1861-62 340 Hhds

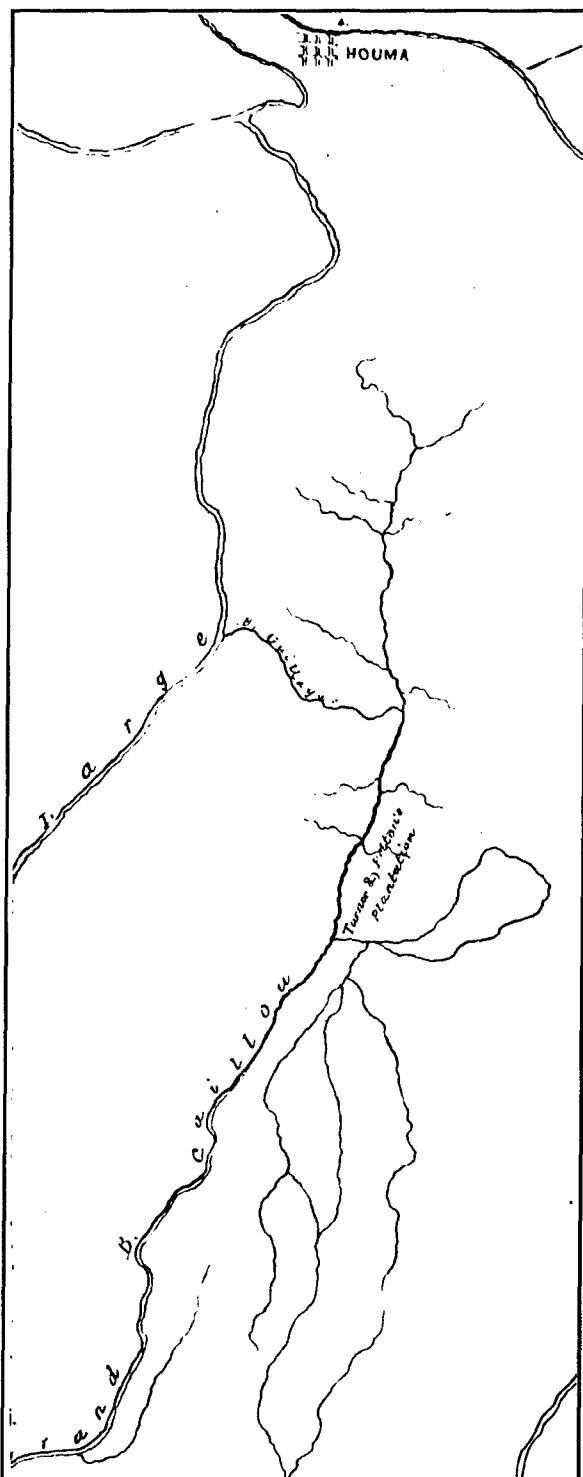


Figure 5-10. Detail of the Hughes map of 1842, showing "Turner & Pelton's Plantation" on Bayou Grand Caillou (Hughes 1842).

of sugar were raised on Cedar Grove (Champomier 1859; L. Bouchereau 1869). No Dr. Rose appears in the sugar records at all.

R.R. Barrow, discussed above, had acquired his part of the Talbo claim by 1844, perhaps from the William R. Butler listed in the sugar records for this location in 1831 (see Figures 5-5 and 5-9). William's output for that year was 53 Hhds of sugar. Thirteen years later, R.R. Barrow, in partnership with one Baker, produced 193 Hhds of sugar that season. Known as Caillou Grove, this property grew 134 Hhds of sugar in 1845-6, and belonged solely to R.R. Barrow. For the 1849-50 season production was 230 Hhds in a mill powered by steam. Production dropped from 202 in 1850-51 to 90 Hhds for the next two seasons. Yet Caillou Grove rebounded to raise 230 to 560 Hhds annually between 1854 and 1861, excluding a bad year in 1856-57 when output was just 83 Hhds of sugar (Champomier 1831, 1845-1846, 1849-1859; L. Bouchereau 1869).

John M. Pelton either did not raise sugar on his previously unclaimed sections (Section 39, all of 40 and 41, and part of 42, T18S, R17E) adjacent to the Talbo claim (see Figures 5-5 and 5-9), or his production was lumped in with that of his much larger plantation to the south discussed below.

According to the La Tourette map, Section 10 (T18S, R17E) of Edmund Fongg's claim had passed to a Mrs. Wade by 1853 (see Figures 5-5 and 5-9). Yet her name does not appear in the sugar records. She might have been a relative of N.C. Wade who owned property outside the project area by 1846 (Champomier 1849). Fongg's remaining Sections 44, 3, and 12 (T18S, R17E) are shown as unoccupied (see Figures 5-5 and 5-9). George Toups' sections to the south, 45, 4, and 9 (T18S, R17E), also appear vacant. At some time between 1830 and 1846 part of Charles Jumonville Devilliere's Section 1 (T19S, R17E) had been transferred to the widow and heirs of Albert Beausergent (McCulloh 1856). By 1846 the property belonged to Thomas Butler (see Figures 5-6 and 5-9). R. G. Ellis had obtained at least part of Section 2 (T19S, R17E) from the heirs of Guillaume Terrebonne and some part of Section 19 (T19S, R17E) from Pedro Gonzales by 1853 (see Figures 5-6 and 5-9).

Thomas Butler had acquired the Devilliere tract by 1844 probably from his relative "Judge Butler" who appears as the owner in the sugar records of 1831 with an output of 37 Hhds. Thomas increased

the yield by 1844 to 408. Brothers Thomas and Richard Butler worked the property the next year and raised 330 Hhds. By the 1849-50 season, Thomas Butler had died and his estate produced 436 Hhds of sugar. This property had a steam-powered mill by 1850-51 that yielded 308 Hhds. In the good seasons between 1852 and 1859 the crop ranged from 176 to 550 Hhds annually. However, in 1856-57 just 81 Hhds were produced (Champomier 1831, 1845-1846, 1849-1859; L. Bouchereau 1869).

Richard G. Ellis reportedly owned 1893 arpents of land primarily on the left bank of Bayou Grand Caillou that he had acquired from John Hutchins (Watkins 1939:69). While his name is shown on the 1846 La Tourette map on the old Terrebonne and Gonzalez claims, R.G. Ellis does not appear on Grand Caillou in the sugar records until 1855 when he had no crop. Nor was sugar raised on his land, known as Ellislie, the next season. He managed to eke out 13 Hhds in 1857-58, built up to 78 Hhds by 1858-59, and peaked at 128 Hhds in 1861 (Champomier 1856-1859; L. Bouchereau 1869).

A new joint ownership, Blanchard & Ranson, appears in the sugar records in 1851 that also must have been located on parts of the Terrebonne and Gonzales land grants, perhaps those portions shown as vacant on the 1846 La Tourette map (see Figures 5-6 and 5-9). They used a horse-powered mill to produce 55 Hhds of sugar in 1851-52 and 1852-53 and called their property Blanchard Plantation. Output tripled to 150 Hhds in the 1853-54 season, probably due to a conversion to steam power. Yields ranged from 150 to 315 Hhds between 1855 and 1862, again excepting the 1856-57 season when just 70 Hhds were made (Champomier 1852-1859; L. Bouchereau 1869).

The former grants of Jacques Lambez (Section 85, T19S,R17E), John Charles Terrio (Section 86, T19S,R17E), and Louis Cossier (Section 87, T19SR17E; Section 37, T20S,R17E) had been transformed into two large sugar plantations by the time La Tourette made his map (see Figures 5-6, 5-7, and 5-9). The west bank lands belonged to Chancellor Quitman and were known as Live Oak Plantation, while the larger Dulac (sometimes Bayou Dulac) Plantation on the east bank belonged to John M. Pelton, mentioned previously in reference to the Felice and Talbo claims. Dulac Plantation also included all or parts of Sections 10, 11, 22, 15, 16, 21, and 22 (T19S, R17E)—lands previously unclaimed (see Figures 5-6, 5-7, and 5-9). All tracts south of Sec-

tion 22 in the project right-of-way are shown as vacant on the La Tourette map (see Figures 5-7 and 5-9).

Chancellor Quitman, called Capt. Quitman in the sugar records, owned his plantation by at least 1844 when he raised 295 Hhds of sugar. Production at Live Oak ranged from 205 to 434 between 1845 and 1859, excluding the bad season of 1856-57 when just 93 Hhds were raised. Governor John A. Quitman is listed as the property owner by the 1850-51 season and is operating a steam-powered mill by this time. He entered a partnership with his son F. Henry Quitman in 1855 that persisted to at least 1859 (Champomier 1845-1846, 1849-59).

John Anthony Quitman was a native of New York State, but moved to Natchez, Mississippi where he studied and practiced law. He served as governor of Mississippi from 1835 to 1836 and 1850 to 1851. He also served in the Mississippi State house and senate, as a state court judge, and as a U.S. representative. While holding the latter office, Quitman was apparently deliberately poisoned during the inauguration banquet of President James Buchanan in Washington, D.C. He subsequently died on July 17, 1858 in Adams County, Mississippi near Natchez (Kestenbaum 2003).

John Quitman bought property in Terrebonne Parish in 1829, 1833, 1834, 1837, and 1838, although he never appears to have resided there. In 1838 he purchased the eastern half of the Lambez grant from James Bowie who had acquired it from Jacques Lambez. In 1855 John passed one-third of Live Oak plantation to his son F. Henry Quitman who lived there in a colonial residence known as Quitman Place (Figure 5-11). Upon John's death in Adams County Mississippi on July 17, 1858 his remaining undivided two-thirds of the plantation were described as 114 arpents front on the right bank of Bayou Grand Caillou valued at \$77,525 (Watkins 1939:70-72).

Dulac Plantation, opposite Live Oak on Bayou Grand Caillou, belonged to John M. Pelton by at least 1844 when he raised 750 Hhds of sugar. Large yields of between 410 and 825 Hhds were the norm on Dulac from 1845 to 1861, again excepting 1853-54 when just 317 Hhds were produced (Champomier 1845-1846, 1849-59; L. Bouchereau 1869).

On the Banks map of 1863 (Figure 5-12), the names of some of the original claimants persist. However, some obviously contemporary owners and their homes are shown as well. Mr. Connolly and

Bond & Barrow's cane fields appear in Section 103, although former claimant "Rob Martin" is listed there as well. A structure appears on the Bond & Barrow tract. Sugarcane fields are clearly shown along bayous Grand Caillou, du Large, Grassy (Four Points), and Petit Terrebonne (Black), as well as several short man-made canals.

By 1861, previously unclaimed Section 9 (T19S, R17E) between Dulac Plantation and Bayou Grand Caillou had apparently been settled by a Wilton whose home stood near the confluence of bayous Grand Caillou and Sale. As no Wilton appears in the sugar records, he may have been a small farmer that raised other crops. The only Wilton documented in Lafourche or Terrebonne parishes at this time is William Wilton from Long Island, New York. He married Terrebonne native Marcelline Guitreaux on 26 May 1836 and had at least two children: Louise, born 13 October 1837, and Mary, born 30 November 1838. Both these births were recorded in the Catholic Church in Lockport (Hebert 1978:541). A son, William L. Wilton may have been born after 1840 (Chauvin n.d.:215). The Wilton home does not appear on the USGS quadrangle map of 1892 and may have been removed or abandoned by this time (USGS 1892a). The archaeological remains of this house, if they survive, would be located in the vicinity of prehistoric site 16TR151, at the intersection of bayous Plat and Grand Caillou, immediately east of the HNC.

From the 1840s until the outbreak of the Civil War in 1861, the lands within the study area continued to develop into sugar-producing plantations and small farmsteads. Over 100 large sugar plantations with 80 sugarhouses were in production in Terrebonne Parish by 1851. The greatest impact on the region was to come in the form of the New Orleans, Opelousas, and Great Western Railroad, designed to link New Orleans with western Louisiana. By the early 1850s, the railroad had acquired rights of way for much of its proposed route across Tiger Island (Goodwin et al. 1985a:53). Land on the western end of the island had been acquired during the 1830s and 1840s by Dr. Walter Brashear (Goodwin et al. 1985a:43). Brashear donated his lands to his children, Robert B., Thomas T., and Francis E. Brashear in 1842 (Goodwin et al. 1985a:46), and in 1853, they had a plan drawn up to divide their holdings into lots within the "Town of Brashear" (Goodwin et al. 1985a:58, Fig. 7). In March 1860 the inhabitants of the town petitioned the Louisiana legis-



Figure 5-11. Quitman Place on Live Oak Plantation (Watkins 1939).

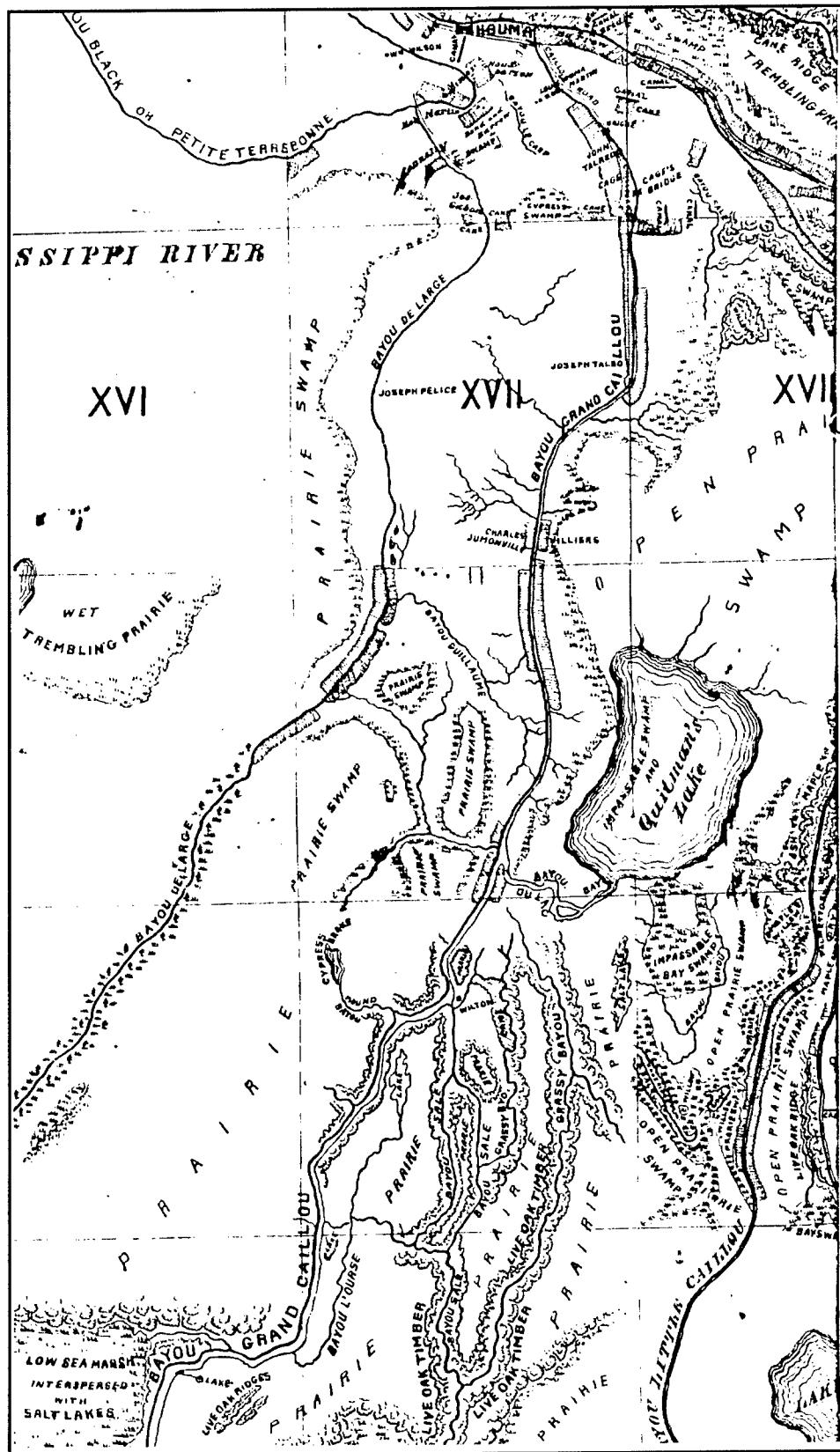


Figure 5-12. Banks map of 1863, showing landowners, structures, cane fields, and canals in the project area (Banks 1863).

lature for incorporation status. This was granted, and Brashear City became a reality (Goodwin et al. 1985a:60).

In the eastern part of the study area, the town of Houma began to grow as more and more settlers moved into the area. Originally established around what is believed to have been one of the Houma Indians' principal villages, the actual town developed on land claimed by Joseph Hache in Section 7, Township 17S, Range 17E (see Figure 5-4). In 1832, Houma became Terrebonne's parish seat (Work Projects Administration [WPA] 1941:390), although the first actual buildings in town were not erected until 1834. Prior to this date, Williamsburg (now Bayou Cane) about four mi west of Houma had served as the parish seat.

By 1841, Houma still consisted of just "three or four little houses" (Becnel 1989:12-13) that were confined to the south bank of Bayou Terrebonne. While incorporated as a city in 1848, Houma's corporate limits were not expanded to include the north bank of the bayou until 1899 (Castille 1983:2). The 1855 plat map of the township shows only 11 city blocks within Hache's claim fronting on Bayou Terrebonne (McCulloh 1855) (see Figure 5-4). However, a note on the map states that the entire township originally was surveyed in 1830 and '31, so the tiny town shown may actually date to the 1830s. G. N. Pierce (reprinted in Walkins 1939:106-107) described the town in 1851 as a:

...considerable village,...consist[ing] of five stores, ten or twelve dwelling-houses, a church (Methodist), a blacksmith shop, a schoolhouse, a hotel, a grog-shop and billiard room, together with the paraphernalia of justice—such as the courthouse, Clerk's, Sheriff's and Recorder's offices, (all in one building) and a jail. Offices here, though elective, are hereditary, and descend from father to son, or in default, to collateral relations; and here appears to be antagonism between the American and Creole part of the population.

There are also in this place sundry lawyers' and doctors' offices.

In 1861, Louisiana seceded from the Union and joined the Confederate States of America. Early in the war, New Orleans and Baton Rouge were occupied by Union troops and became staging areas for expeditions into more remote portions of the state. In 1863, both Confederate and Union forces vied

for the strategic location of Berwick Bay and Brashear City.

Goodwin et al. (1985a:60-64) provide a good review of the Brashear City area during the war. Principally, the location was highlighted by the initial construction of two Confederate forts: Berwick and Chene. Fort Berwick consisted of:

An earthen fort, quadrilateral in shape with parapets five feet high on three sides, the rear being protected by palisades about seven feet high, loopholed for musketry, the whole was surrounded by a moat six feet wide in front and three feet in rear. On the front face two 24-pdr pivot guns were mounted which commanded the outlet of Wax Bayou [Casey 1983:24].

The fort was built in July, 1861, and was designed to prevent access, through Wax Bayou, to the marshes to the west and the southern edge of the Teche ridge. The fort was located in the northeast corner of Section 16, Township 16S, Range 12E, along what is today the north bank of Little Wax Bayou at its junction with the Lower Atchafalaya River (see Figure 3-3). Casey (1983:24-25) reports that the fort was abandoned in April, 1862, after the fall of New Orleans.

Fort Chene was another small earthwork located at the junction of bayous Chene and Shaffer, along the southeast edge of Avoca Island (Gibson 1978b:171; Casey 1983:44; see Figure 3-3). It was built in August, 1861, and contained a small, central barracks area protected by an outer ditch around the earthworks (Casey 1983:44). The entrance to Bayou Chene apparently was closed off by a stockade. Armament consisted, at various times, of two 24-pd pivot guns, one rifled 32 pounder, and four 24 pounders (Casey 1983:44). As with Fort Berwick, Fort Chene was abandoned in April, 1862, after the guns were spiked (Casey 1983:44).

Union forces moved into the region in October, 1862, under the command of Brigadier General Godfrey Weitzel. Included in the force were four gunboats, *Estella*, *Calhoun*, *Kinsman*, and *Diana* (Goodwin et al. 1985a:62). With the gunboats patrolling the Atchafalaya River and Bayou Teche, the Union troops occupied Brashear City and built additional fortifications. Figure 5-13 shows a map of Union earthworks and minor forts as drawn in 1865 by Captain P. Harris of the U.S. Corps of Topographical Engineers. Included in these were Fort Brashear

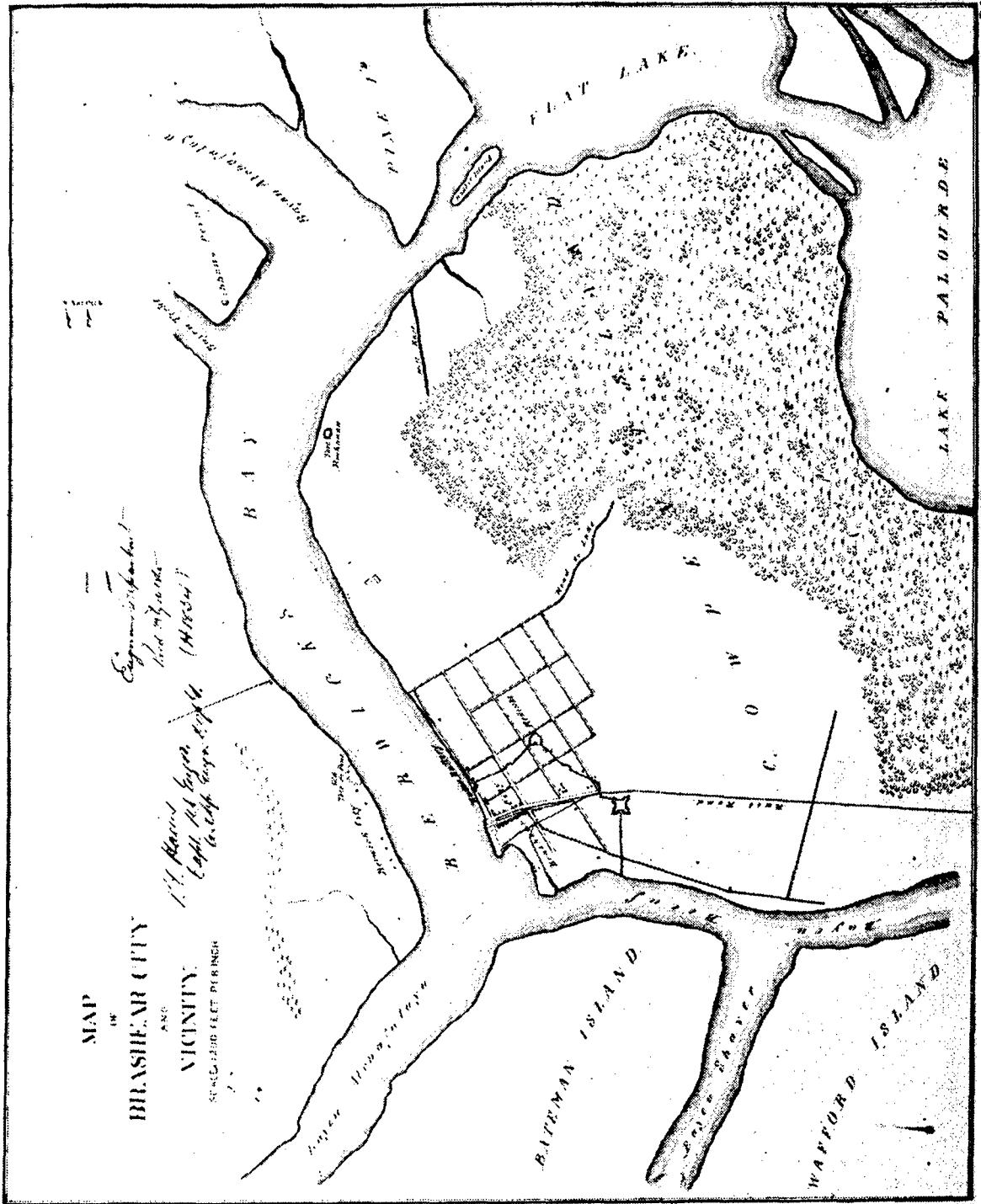


Figure 5-13. Portion of the Union map of Brashear City and Vicinity during the Civil War, showing military installations and associated earthworks (Harris 1865, reproduced in Casey 1983:Pl. 47).

(later to become Fort Star), shown at the eastern edge of the city, Fort Buchanan, opposite the mouth of Bayou Teche; a water battery on Berwick Bay, and a redoubt located north of the railroad near the center of town (Casey 1983:32-33). Embankments, including two redans, were built to connect the principal earthworks within the city (Casey 1983:33).

Another minor fort was apparently constructed at Boeuf Station, on the east bank of La Coup just south of the crossing of the railroad. Called Fort Weitzel on several maps of the era, little is known of the post (Casey 1983:243). It may simply have been a small earthwork garrisoned by a few troops. In the project area another small fort apparently existed at the intersection of Mound Bayou and Bayou Grand Caillou, the site of Indian mound site 16TR22. "Old Fort (Butler)" appears on the site on a 1931 U.S. Engineer Office map of canals on Bayous Grand and Petit Caillou, Pelton, and La Carpe (Odom 1931) (Figure 5-14). However, no historic component was noted at this site when visited by McIntire in 1951 or Saunders in 1994. Three battles are known to have occurred along Bayou Grand Caillou; the first on 8 May 1862, the second on 19-27 November 1864, and the last on 19-25 April 1865 (Booth 1921: 514; Odom 1943:1022).

In June of 1863 the Confederates launched a waterborne assault on the north bank of Tiger Island and captured Brashear City by approaching from the east (Goodwin et al. 1985a:64). At the same time, Confederate forces marched westward from Thibodaux along the railroad line and captured the fort at Boeuf Station (Bergeron 1985:203).

Confederate control of the region was short lived, however. On July 9, 1863, the Confederate forces at Port Hudson surrendered, freeing the large Union siege force for action in south Louisiana. Fearful that Confederate forces would be trapped east of the Atchafalaya River, Major General Richard Taylor, commander of Confederate troops in south Louisiana, ordered all his forces west of Berwick Bay to Bayou Teche. This retreat left the region open to Union forces, which moved in shortly thereafter (Bergeron 1985:204).

Of interest from this time period, is the Confederate map of St. Mary Parish, completed in 1864, after the Confederate withdrawal across Berwick Bay (see Figure 3-3). It not only shows fortification occupied by both sides, but includes the locations of plantation buildings (main houses, sugar mills,

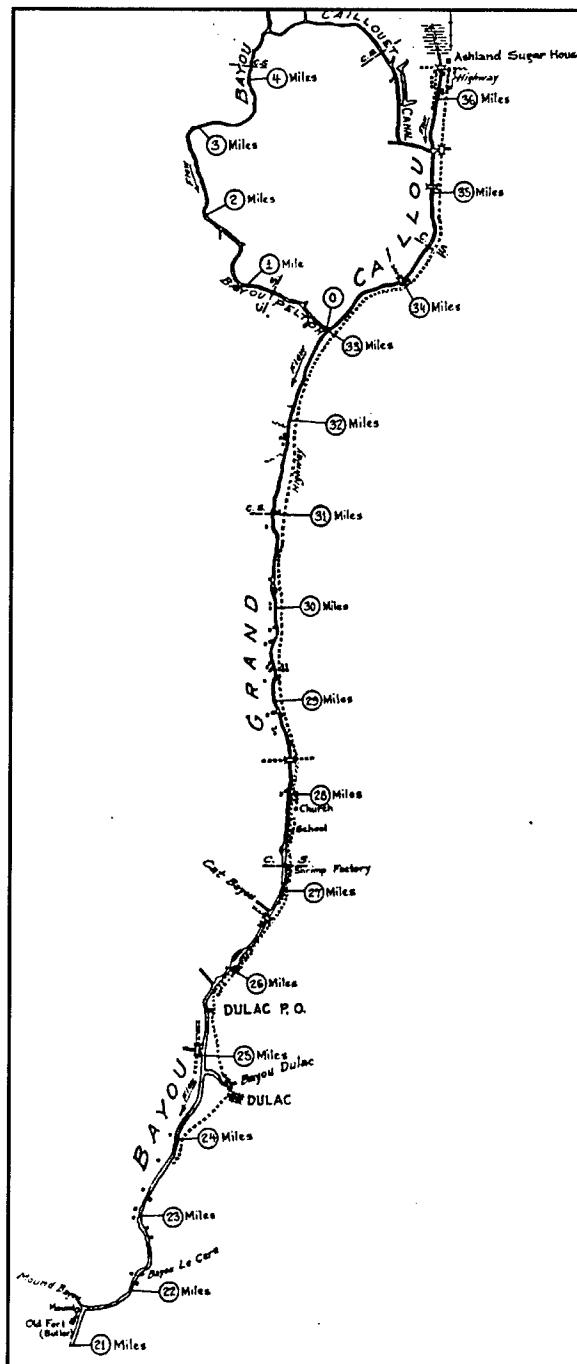


Figure 5-14. Civil War fort shown on 1931 U.S. Engineer Office map of canals on Bayous Grand and Petit Caillou, Pelton, and La Carpe (Odom 1931).

quarters areas) along the north bank of Avoca Island. Sections 40, 41, 43, and 47 each contain one plantation complex, while Section 45 appears to contain two complexes. These almost certainly represent the holdings of Wofford, Rochelle, and Edwin

Stansbury, the latter a large landowner on Tiger Island who also acquired land on Avoca Island (Goodwin et al. 1985a:49). No captured Confederate maps exist for Terrebonne Parish.

Following the Civil War, a period of economic stagnation developed that lasted throughout much of the Reconstruction era. In the project area, only John M. Pelton of Dulac Plantation and C.S. Cage of Ashland were able to retain their properties through the war. Pelton also seems to have acquired adjacent Live Oak Plantation from the Quitmans. Yet both Pelton's large plantations only produced about one-sixth of his pre-war sugar yields in the 1868-69 season. That same year, Cage's sugar production dropped by almost 50 percent to 280 Hhds, and he had also raised 20 Bhls of rice. All but one of the plantations in the project area were using steam power and open kettles at this time. All the sugar houses but Pelton's were made of wood, while his was brick and had a shingled roof (L. Bouchereau 1869).

Bond and Barrow's Crescent Plantation on Black Bayou belonged to Dr. A. Helmick in 1868 and produced 255 Hhds of sugar. Boykin's Nameoka had passed to J.C. Jackson, had no sugar apparatus at all, and grew 10 Bhls of rice. LMT McClung & Company owned Robinson's Cedar Grove by this time where 39 Hhds of sugar and 15 Bhls of rice were grown. Both Caillou Grove and Ellislie plantations had been acquired by Ewing Chapman by 1868. That year he grew 54 Hhds of sugar on Ellislie and 77 Hhds of sugar plus 15 Bhls of rice on Caillou Grove. Finally the Blanchard and Rancon farm belonged to J. Lapene & Company and produced 169 Hhds of sugar (L. Bouchereau 1869).

Over the next two years R.G. Ellis briefly regained Ellislie. Likewise, R.R. Barrow was able to buy back Caillou Grove and E. M. Boykin his Nameoka, both in partnership with J. Lapene. Pelton sold Live Oak and Dulac plantations in 1872 to G.D. Cragin. The Barrows returned to Crescent Plantation on Black Bayou in 1875 in conjunction with Peter Berger. Meanwhile Ellislie and Live Oak had been absorbed by J. Lapene. By 1876, the only pre-war owners in the project area were Duncan S. Cage at Ashland and Boykin at Nameoka. Boykin finally sold out in 1880 while the Cage family held out until 1887. The project area properties then moved through several hands as tracts were subdivided and some renamed (A. Bouchereau 1880, 1887; L. Bouchereau 1869-1876).

Reconstruction in Terrebonne Parish was followed by a period of economic growth and renewal in the last few decades of the nineteenth century. This upswing was due to innovations in agricultural practices, such as artificial rice irrigation, to the application of new scientific techniques to cane and cotton farming, to the discovery of oil and sulphur in the southwestern parishes of the state, and to the growth of the lumber industry, which was spurred by the completion of several railroad systems.

The clusters of buildings considered typical of sugar plantations appear along Bayous Black and Grand Caillou on the 1892 USGS quadrangle maps (USGS 1892a, 1892b). In 1891 the great Terrebonne Sugar Mill opened at Montegut (Wurzlow 1985:VII:58), and by 1900 three sugar mills were in operation along Bayou Grand Caillou. The one on Dulac Plantation, then owned by the Widow F. Lottinger, was destroyed by a hurricane in 1909. Likewise, the hurricane of 1926 demolished the mill at Live Oak Plantation (Figure 5-15). The Ashland sugar mill shut down in 1930.

Two saw mills also operated briefly along the bayou, one on Dulac Plantation at Goatfield, the old name for the point of land the Coast Guard Station now occupies, and the other on Live Oak Plantation. The former mill had a capacity of 15,000 board feet per day, while the latter mill had closed by 1897 (Terrebonne Parish Directory 1897). Logs were dragged by pullboats to the nearest canals and then floated to the sawmill. Pullboat scars radiating out from Forty Acre Bayou (a logging canal) are still visible on a 1956 aerial photograph in the southwest portion of the Talbo grant, then known as Cedar Grove Plantation. Similar scars appear along the western edge of the old Lambez claim on Live Oak Plantation (Amman International Corporation 1956:245A). Grand Caillou timber was floated westward to Morgan City.

Cedar Grove Plantation on part of the old Talbo grant (Section 2, T18S, R17E) belonged to Blum & Cantrelle in 1891. Manager and overseer T. A. Prevost and his assistance Albert Cantrelle had 250 acres in cane and 130 in corn that year. Ashland, also on part of the Talbo grant, belonged to Caillouet & Maginnis. W. R. Darden served as overseer, assisted by E. J. Richard. Coopers Oscar and Fred Robichaux were also employed there (Terrebonne Parish Directory 1897).

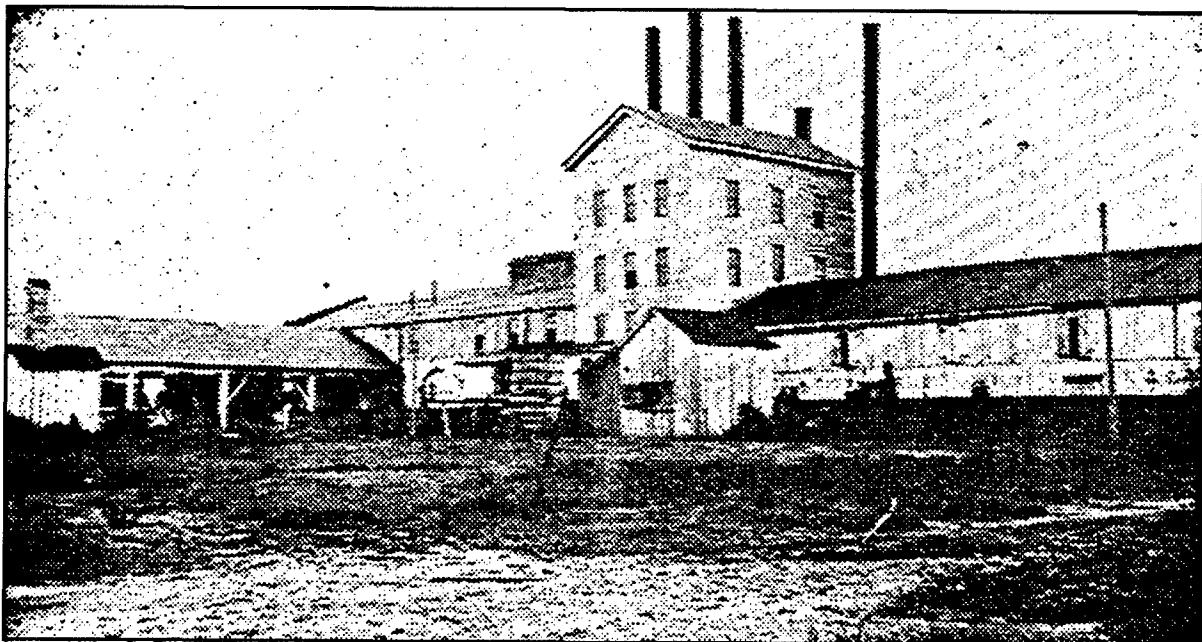


Figure 5-15. Sugar Mill on Live Oak Plantation circa 1900 (Wurzlow 1985:59, vol. 7).

On the old Fongg, Toups and Devilliere grants (Sections 44, 3, 10, and 12; 45, 4, 9, and 14; 6 and 7 in T18S, R17E. Section 1 in T19S, R17E) in 1891 were J. B. Leblanc's small plantation with 25 acres in cane; Cane Brake Plantation owned by Louis Waguestack; the home of Luke Lecompte, a carpenter; Grand Caillou Plantation; and the farm of Luke Boudreux. The Cambon Brothers operated Grand Caillou Plantation and store, while Luke Boudreux also ran a store with his clerk W. T. Raby. Boudreux had 200 acres in cane and a 100 in corn in 1891. Joseph W. Martin owned Live Oak plantation by this time, and employed Anatole Boudreux as engineer and blacksmith. Manager E. J. Engman had 170 acres in cane and 60 in corn that year. In 1896 the Live Oak sugar mill, on the banks of Bayou Grand Caillou, produced 245,000 pounds of sugar. Dulac plantation and store belonged to Mrs. Frederic Lottinger by 1891 and covered three thousand acres, 550 in cane and corn. Her clerk was Ellis Lottinger and her carpenter J. Domangue.

An excellent review of the Reconstruction era in the Morgan City area is provided by Goodwin et al. (1985a:64-82). Suffice it here to say that in 1869 Charles Morgan purchased the bankrupt New Orleans, Opelousas, and Great Western Railroad, and renamed it Morgan's Louisiana and Texas Railroad. In conjunction with his fleet of steamships operating out of Brashear City, Morgan's railroad was able

to streamline transportation, commerce, and communication with the west. In 1871, Morgan had a ship channel dredged through the Lower Atchafalaya River in order to facilitate his steamship line. By 1873, Morgan's impact on Brashear City had been tremendous, and had helped bring the region out of the economic depths of Reconstruction. As Goodwin et al. (1985a:78) note, that year the Louisiana legislature changed the name of Brashear City to Morgan City, in honor of the various Morgan accomplishments.

By the end of the century continued economic growth in the region had led to significant population increases, resulting in a shortage of land suitable for cultivation. One solution to the problem that was attempted in several areas of Louisiana during this period was land reclamation. The largest project undertaken in the study region was carried out by John N. Pharr and his sons on Avoca Island. Along with other plantation owners on the island, Pharr organized the Avoca Island Drainage District.

The reclamation work began in the 1890s with the dredging of canals and the construction of levees and a pumping station on the Pharr's Aleda Plantation located on the eastern end of the island. During the succeeding decade the work, by then under the direction of one of Pharr's sons, Eugene, was expanded to include the entire island. By 1914 three major pumping stations, 42 mi of canals, and a levee

system that surrounded the entire island had been built. (The pumping stations constitute archaeological sites 16SMY52, 16SMY60, and 16SMY183.) Apparently, the land-reclamation project was also viewed as a speculative scheme, with a great deal of effort going towards a publicity campaign designed to extoll the virtues of Avoca Island real estate (Gibson and Stout n.d.:5-6). In fact, Pharr was so influential, that he was able to have the new New Orleans-Morgan City highway cross Bayou Chene at the eastern end of Avoca Island, follow the north shore of the island westward to Bayou Shaffer, and then cross Bayou Boeuf to Tiger Island (Gibson and Stout n.d.:5). All of this came to an abrupt end, however, with the flood of 1927. The levees were broken in several places, inundating much of the island's interior. Sale of real estate was then out of the question, and by 1928 the entire venture went bankrupt. Shortly thereafter Avoca Island was acquired by the Whitney Bank of New Orleans at a sheriff's sale (Gibson and Stout n.d.:7).

While not the first town established in Terrebonne, Houma soon became the largest and has remained the principal urban center in the parish to this day. The Houma oyster first made its mark on the national market in 1895. Fifteen years earlier in 1880 the Baltimore oyster dominated the trade while the industry supported 24,000 workers. Oysters were a principal protein component in the diet of many people in the eastern seaboard cities. Baltimore production reached an all-time high in 1884 of 15,000,000 bushels (Maryland Dept. of Natural Resources 2003). However, beginning in 1895 the Houma oyster business grew exponentially, shipping a million bushels by 1901 while the Baltimore oyster yield declined to 6,000,000 bushels.

In 1901 when Houma businessmen first gathered to push for a deep water route to the Gulf, they noted that 600 luggers were engaged in the oyster trade, but had great difficulty getting their produce to Houma, the nearest rail junction. The oysters were unloaded from luggers by air suction and sent to the steamer by conveyer to be brined and cooked in the shell. They were then mechanically shucked (Wurzlow 1985:VIII:97). With a six-foot channel the Houma businessmen argued, the city's oyster business could export 250,000,000 oysters a year. With ten feet of water the town was predicted to become a second Baltimore (Glass 1901:19). By 1905, Houma had indeed become one of the largest oyster shipping ports in the world, exporting both fresh and canned oysters. At least 12 oyster ship-

ping and packing companies were in operation in Terrebonne by 1910 (Lockport Rotary Club 1994:11). The first shrimp-canning factory opened in Houma in 1924 (Castille 1983:2). Shrimping using the gas-powered trawler quickly became an important business and remains so today.

Houma's population grew steadily throughout the historic period; but in the 1920s and 1930s, the city experienced rapid growth due to the discovery of oil and gas in Terrebonne Parish (Castille 1983:3). Terrebonne became the gateway to the heaviest concentration of offshore oil service companies in the state. By 1960, the combination of rich oil production backed by Houma's productive waters, fertile soil and natural mineral resources, enabled Houma to become one of the fastest growing cities in America (Barton et al. 2003). By the late 1970s, Houma's main focus was the oil industry. When the bottom fell out of the industry in the early 1980s due to cheaper foreign product and dwindling local resources, Houma also declined. For nearly two years the Houma-Terrebonne area experienced an unemployment rate near 25 percent. While oil remains the bulk of the parish economy today, Terrebonne also produces over 20 percent of Louisiana's seafood (Barton et al. 2003).

Oil and gas exploration, both in the marshes and swamps of the region and offshore in the Gulf of Mexico, has led to the alteration of much of the area's landscape. Extensive oil-rig fabricating yards have developed along Bayou Boeuf and Bayou Black, reworking and destroying much of the earlier cultural evidence, both prehistoric and historic, for those areas. Hundreds of miles of canals have been dredged for both well sites and pipeline routes, and saltwater has begun to move up these canals destroying large expanses of freshwater marsh. With the loss of the marsh grass, the terrain has broken up and vast areas of open water have developed. Between 1955 and 1978 Terrebonne Parish lost over 116,000 ac of land area due to a combination of subsidence, shoreline erosion, and the breakup of marsh (Wicker et al. 1980).

A circa 1930 map of Township and Sections in Terrebonne Parish prepared by the Parish Assessor's Office, and a similar but perhaps slightly earlier map reflect the growing population and increasingly industrial bent of the parish at this time (Figures 5-16 through 5-18). Coverage begins with the lower portion of the Gabon grant in Sections 32 and 17 (T18S, R17E) (see Figures 5-5 and 5-16). Most of the tract

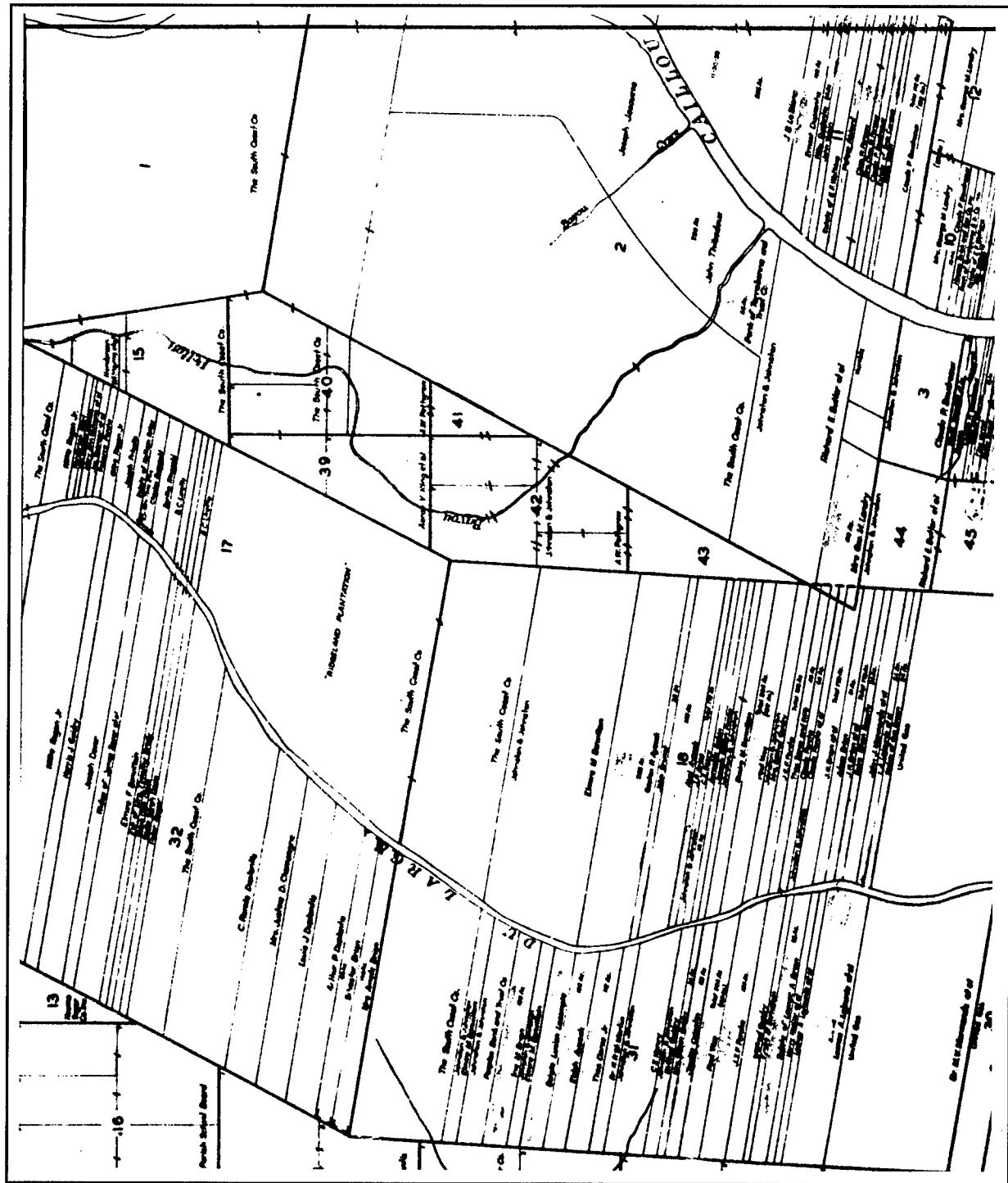


Figure 5-16. A portion of a circa 1930 plat map showing property ownership along the upper end of Bayou Grand Caillou (Terrebonne Parish Assessor's Office ca. 1930).

Houma Navigation Canal Deepening Project

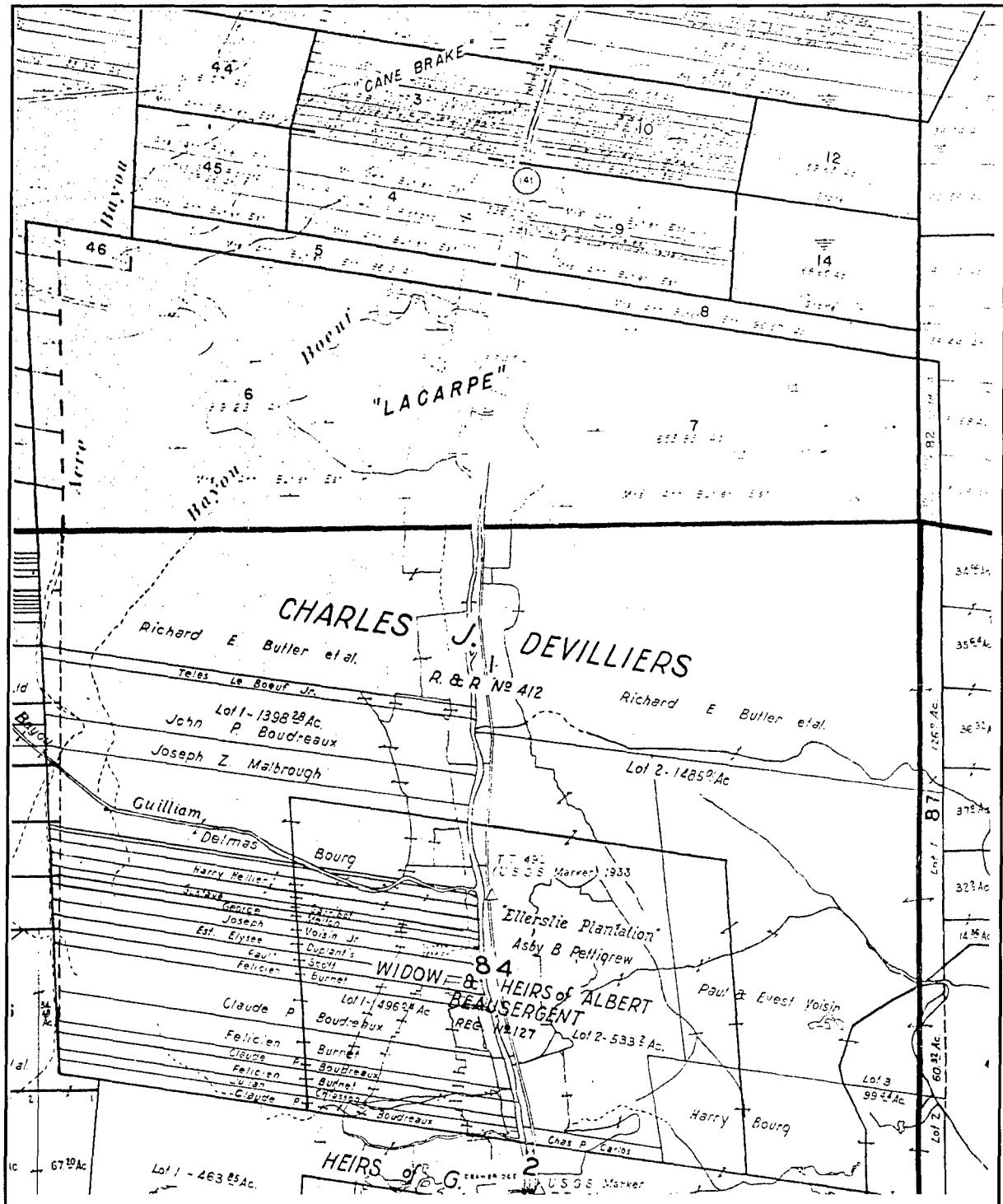


Figure 5-17. A portion of a circa 1930 plat map showing property ownership along the middle section of Bayou Grand Caillou (Terrebonne Parish Assessor's Office ca. 1930).

had been subdivided into some 30 parcels, only a few of which spanned Bayou du Large. The largest tract belonged to the South Coast Co. and was known as Ridgeland Plantation. This company also

owned most of the Talbo grant (Sections 2 and 79, T18S, R17E) on Bayou Grand Caillou (see Figures 5-5 and 5-16). This and the adjoining Talredo grant to the north retained the name of Ashland Plantation.

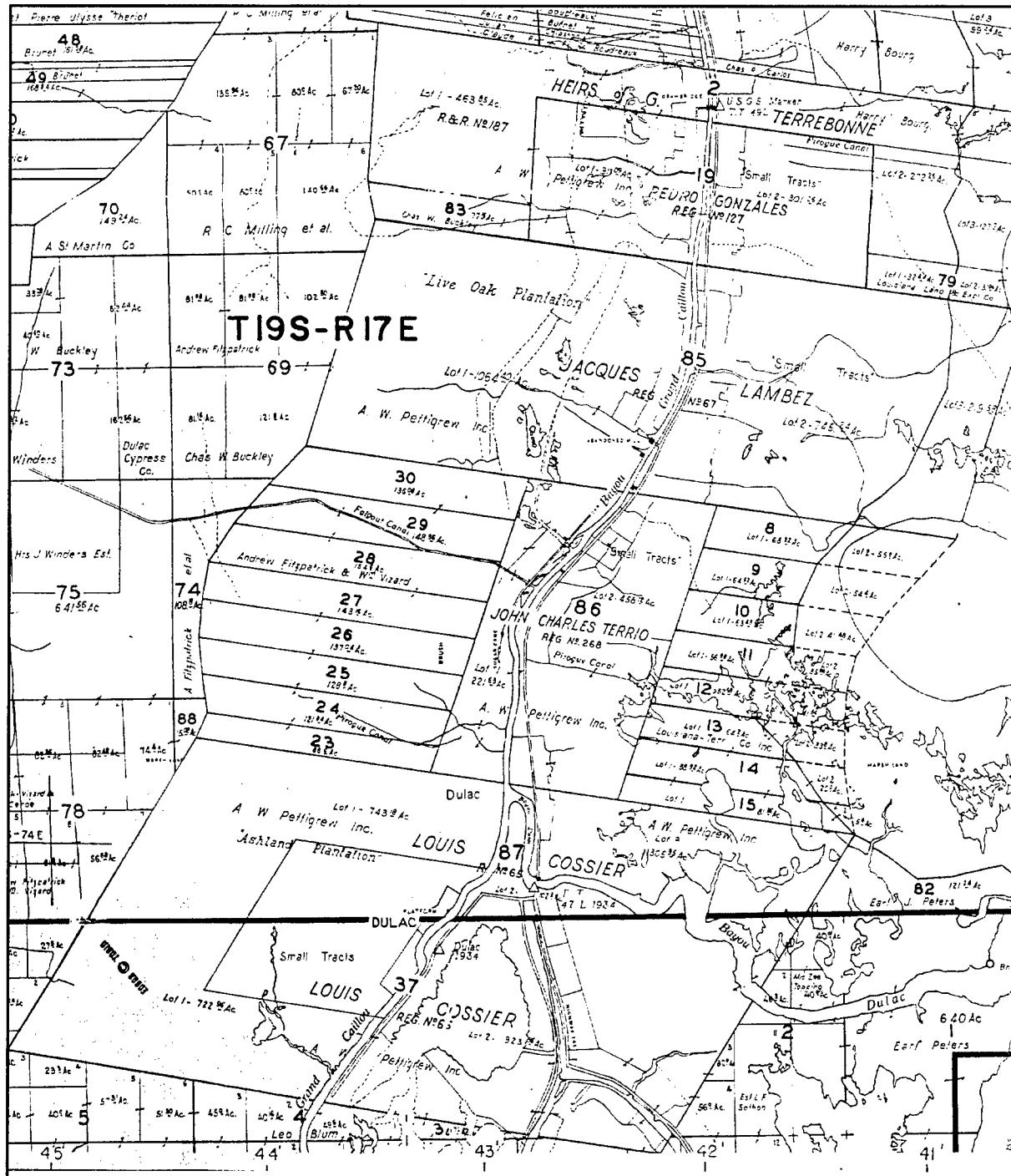


Figure 5-18. A portion of a circa 1930 plat map showing property ownership along the lower end of Bayou Grand Caillou (Terrebonne Parish Assessor's Office ca. 1930).

tion (USGS 1962). The Ashland sugar house and associated buildings appear on the 1931 U.S. Engineer Office map of canals on Bayous Grand and Petit Caillou, Pelton, and La Carpe (Odom 1931) (see Figure 5-14). The Ashland Canal was known as the Caillouet Canal at that time.

Over 40 tracts had been created from the old Felice grant (Sections 18 and 31, T18S, R17E) (see Figures 5-5 and 5-16). Just the southwest quarter of the Devilliers grant (Sections 6 and 7, T18S, R17E; Section 1, T19S, R17E) had been minutely subdivided, while the entire northern half belonged to

Richard E. Butler, et al (see Figures 5-5, 5-6, and 5-17). Paul & Evest Voison and Harry Bourg were the larger landholders on the east side of Bayou Grand Caillou by 1830, in addition to Asby B. Pettigrew who called his land Ellerslie Plantation. Ellerslie apparently once included the Vosion and Bourg tracts as well. Bourg also owned part of the old Terrebonne claim (Section 2, T195, R17E) by 1930.

Another Pettigrew, A. W., held the entire Lambez (Section 85, T19S, R17E), Terrio (Section 86, T19S, R17E), Crossier (Section 87, T19S, R17E; Section 37, T20S, R17E), and Gonzalez (Section 19, T195, R17E) claims by 1930 (see Figures 5-6, 5-7 and 5-18). That land east of the bayou was still known as Dulac Plantation and the property west of Grand Caillou as Live Oak Plantation. (Live Oak is mistakenly labeled "Ashland" on the 1930 Township map). Adjoining Sections 23 through 30, west of the Terrio grant, belonged to Andrew Fitzpatrick & William Visard by 1930, while the Louisiana Terre Company owned adjoining Sections 8 through 15, east of the Terrio grant.

The status of the native Houma population in Terrebonne Parish was documented by Edison Roy, an MA. student at Louisiana State University, in 1959. The Board of Missions of the Women's Division of Christian Service of the Methodist Church had requested LSU's assistance in evaluating their Indian Missions program in the Dulac community. They estimated two hundred Indian families lived in the Dulac community at that time. Other semi-isolated Indian communities existed at "Lower" du Large, L'Isle de Jean Charles, Point aux Chenes, and "Lower" Montegut (Roy 1959). Seventeen years earlier in 1942, a Houma village of palmetto huts and houseboats persisted on Bayou Terrebonne (Hebert 1978:xxvii).

Roy found that 45 percent of Dulac area residents were white ("Cajuns"), and the remainder primarily of Indian and French ancestry. About ten percent were tri-racial. Homes were located along both sides of the roads running parallel to Bayou Grand Caillou, and the population was evenly distributed on each side of the bayou. While all the whites owned their own homes, only 40 percent of the Indians did. About 25 Indians families (19 percent of the Indian population) lived in houseboats dry-docked on the banks of Bayou Grand Caillou and paid rent to a landowner. In 1959 all the Dulac Indians spoke French, and only six percent were bilingual. (Roy 1959).

The Indians often temporarily migrated for employment. As the shrimp factories owned most of the boats, the Indians had to go where ever the packers ordered. There were proportionately fewer females in the Indian population, as they often married whites and left, while the males remained to shell fish. Schools were strictly segregated with white children at the school north of Grand Caillou and the Indian children at "Dulac Indian." A separate school was provided for black children. In the surrounding parishes, however, Indian children were sent to the white schools. Churches were slightly less rigidly segregated in Dulac, with two Catholic churches, one primarily white and the other primarily Indian. The Methodist, Baptist, and Church of God congregations were majority Indian. In 1959 Dulac had 20 grocery and dry goods stores, seven shrimp packing plants, one theater, several beer parlors, two white dance halls, and two Indian dance halls. The first paved road from Houma to Dulac opened in 1958. Max Stanton, another MA student from L.S.U., identified 1,226 Indians living in Dulac in 1960. While whites lived primarily in Grand Caillou and blacks in Bobtown at the upper end of the project area, all the towns along Bayou Grand Caillou were multi-racial at this time (Stanton 1971). The Dulac schools were integrated in 1965.

Most of the Dulac Indians today continue to work in the seafood industry, principally at the seafood processors. However, this work is seasonal, resulting in long periods of unemployment (Alice Rothrock, personal communication 2003). The Houma Navigation Canal and the lack of levees on Bayou Grand Caillou have resulted in serious flooding in the Dulac area in recent years (Magnus Voisin, personal communication 2003). In 1992 Hurricane Andrew left five feet of water in the Methodist Community Center parking lot, while Lili in 2003 deposited 2.5 ft. Funding from the Federal Emergency Management Agency has allowed most homes in Dulac to be raised or rebuilt. The Indian community remains deeply concerned about the eventual loss of their homes and livelihood due to the perpetual cycle of storms and subsequent erosion (Alice Rothrock, personal communication 2003).

The Water

Travel by boat was a way of life for many years for those who lived along the bayous in Terrebonne Parish. Natural waterways were numerous and roads were few and those that existed were muddy and impassable most of the time. It was normally only

by boat that one could travel reasonably within the region and reach outlying communities and fishing spots, oyster beds and shrimping grounds. Boats were the backbone for commercial transportation in the region, but they also played a vital role in the areas' religion, sports, education and recreation (Wurzlow 1985:V:32).

The importance of water transportation led to early attempts to improve navigation in the region. By 1823, Terrebonne landowners were required by law to keep clear a 10-foot-wide channel along bayous bordering their lands (Watkins 1937:114). In upper Lafourche Parish a man-made connection had been cut from Bayou Lafourche to Bayou Terrebonne in 1825. This canal greatly improved regional shipments of goods, although it was limited to shallow-draft vessels. This canal was later filled, but in its day it contributed to the movement of produce, such as, molasses, moss and sugar through the wharves at Thibodaux (Rogers 1976). Between 1840 and 1945, numerous water courses intended primarily for transportation were built and improved. In the Lafourche area was the Barataria Canal, which later became the Company Canal. This canal provided a convenient route from Morgan City to New Orleans through a system of natural and man-made water courses. Settlements along the middle reaches of Bayou Lafourche had an easy and safe route into the markets to the east and west. The canal provided a continuous east-west navigable waterway from Bayou Terrebonne to New Orleans. By 1908, traffic along the route had declined. Small fish and vegetable luggers were the principal users. Lumber, sugar, moss and molasses were also part of the canal's commerce (Davis 1973).

A variety of small vessels were involved in travel and commerce along these bayous and canals. These included the local craft such as pirogues, chalands, esquifs and bateau (Knipmeyer 1956), as well as flat-boats, luggers, steamboats and, perhaps, keelboats. These vessels were used to move people and to carry the commodities of the region to market, which normally meant travel to New Orleans or to an intermediate location such as Houma, Thibodaux or Donaldsonville where goods were transshipped. Goods moving out of the region included cotton, corn, indigo, molasses, rice, sugar, tafia and lumber (Gould 1951). Sugar, for example, was brought to New Orleans in "pirogues, skiffs, or boats made from solid logs. Each planter has his boat and, . . . could send his crop to market in it—a few hogshead or bales at a time" (Gould 1951:211). Poor records related to

this trade provide little insight into the receipts of Louisiana sugar, molasses and rice delivered in this manner. Sailing sloops, schooners and luggers were also involved in this type of trade. While much of the trade was along inland waterways, some vessels traveled along the coast in the Gulf of Mexico. These vessels would have had to utilize the numerous passes leading to gulf waters, including Cat Island Pass, now part of the Houma Navigation Canal.

Prior to the introduction of the steamboat in the area, flatboats or flats were the major type of commercial craft in use on the inland waterways. One particular type of flatboat was the "cordelle" boat which was simply a flatboat pulled with a rope by men, horses or mules using towpaths worn into the natural levee (Butler 1985). Sailboats were cordelled up the bayou, as well, and were also pushed with a pole (Wurzlow 1985:I:154). Even after the introduction of steamboats, flatboats continued in use and, in fact, increased in number after the Civil War. The flatboat was well suited to the narrow and shallow waters of the bayous. In addition, they were cheap and offered an inexpensive means of carrying bulky freight to market. As can be seen, life and transportation revolved around the water. Even in death, funeral corteges often traveled via the pirogue. One such event was recorded, in a cortege from L'Isle de Jean Charles to a church at Point aux Chenes when the deceased traveled in the first pirogue followed by mourners in their pirogues. In fact, the only way to reach L'Isle de Jean Charles was by boat until after World War II (Wurzlow 1985:V:32).

During the Civil War, the coastal area was used by blockade runners, although the effectiveness of the Union blockade limited the numbers of these vessels. Most of these blockade runners were small sailing vessels and little is known about them, but a few larger steamers also attempted to sneak in or out of the area's myriad of waterways. For example, in February 1862 the sidewheel steamer *Victoria* was driven ashore near Fort Livingston by Union ships as she attempted to enter Barataria Bay (Pearson 1993:474). In September 1861, the small Louisiana state "War Schooner" *Antonia* was ordered to the "Timbalier Islands" to assist two schooners "loaded with arms for the State or for the Confederacy" (Pearson 1993:472). It is not known where, or if, the *Antonia* found these vessels. Later, in November 1861, the *Antonia* was sent to Brush Island to remove or destroy any cattle that might be there to prevent Union forces from obtaining them. Brush Island, now almost gone, was located in

Terrebonne Bay not far from Cat Island Pass. The *Antonia* spent some amount of time patrolling the coast attempting to aid blockade runners and searching for local citizens who might be communicating with the enemy blockade ships. In 1864, Union officer Captain Moore was sent to Bayou Grand Caillou to detect Confederate smugglers. Raids were planned and carried out capturing considerable amounts of food and equipment and a few small boats were destroyed. One boat was mentioned that was not captured, a small schooner used as a blockade runner (Official Records of the War of Rebellion [hereafter cited ORE] 1883:927-929).

The great importance of watercraft in the region inevitably meant that boat building would become important. There were some commercial builders in the area, but many built boats primarily for personal use, family or friends. One of the commercial builders along Bayou Terrebonne was John A. Boyne and his sons John Madison, Andrew and Bill. They had two boatways and one boat they built, the *Helen Snow*, was named for a daughter of one of the boat owners who was born in 1895 during the "deep freeze" when the bayou froze and Houma was covered with 18 inches of snow. The Boynes, as did others, built their boats out of cypress, which grew in abundance in the Terrebonne swamp (Wurzlow 1985:V:33).

A description of the old Boyne Boat Ways is given in the following reminiscence by Ovide Bazet:

This is my conception of the old Boyne boat Works on lower Bayou Terrebonne at Madison's Canal in about the year 1910, at which time I was 10 years old. The boat tied to the wharf is the type they specialized in at that time. It was a wide semi-round bottomed boat with graceful curves... It resembled a large wide scoop with a box on top. There was barely enough space in the cabin for the gasoline engine. The boat was steered on the outside from the rear. There was a large, compartment in the front under the foredeck where the catch of shrimp, fish or oysters was stored in ice until it arrived in Houma. This compartment which was opened by a trap door on the deck was called the "hole". This boat was called a "lugger". In spite of the excellence of workmanship and its gracefulness in the water, the boat was built for hard work. It was designed to navigate the shallow lakes, bayous and bays of which the coast of Terrebonne Parish is noted. Using only hand tools, carpenters

at that time took much pride in their work and regardless of the time involved to build a boat, excellence of workmanship took priority. Every boat could be called a work of art [Wurzlow 1985:V:35].

The Rhodes were another boat-building family in the area. Ernest Rhodes was the founder of one of the first and largest boatways along Bayou Terrebonne at the turn of the century. It was located about a mile below Bush Canal. Ernest was the oldest of four brothers, the others were Frank, Gustave and George. They were the sons of Thomas Rhodes, who was a sea captain. Ernest had seven sons and two of them, Elie and Lawrence, became boat builders. Elie worked for the Houma Boat Company, a branch of the Higgins Boat Company of New Orleans, during World War II building P-T boats, landing boats and Navy boats. Elie Rhodes built many boats after World War II himself, all out of cypress. He considered cypress to be the best boat wood noting that:

Nothing beats cypress for boats. No other wood will take the water like cypress. Another thing, good cypress does not have as many knots in it as other woods. Wherever a limb grows out, you will find a knot in the wood. When cypress trees grow close together in the swamp, they grow up tall before the limbs come out [Wurzlow 1985:V:37].

By the 1950s, when Elie could not find good cypress anymore, he went into the fishing industry catching fish, shrimp and oysters.

Beginning in the third decade of the nineteenth century, steamboats began to travel the waters of the Terrebonne region. Bazet (1934:37) reports that the *S.F. Archer* was one of the first steamers to operate exclusively in Terrebonne Parish. Built along the Ohio River at New Albany, Indiana, in 1854, the sidewheeler *Archer* was owned by J.J. Schaffer & Company and traveled along Bayou Black, making connections with the railroad at Tigerville (Gibson) (Way 1994:407). Other steamers operating in the region were the *Harry*, *Laura*, *Sadie Downman* and the *N. H. Breaux* to name just a few. The *Harry*, *Laura* and the *Sadie Downman* belonged to the Daigle Barge Line, whose founder was Emile A. Daigle. The *Harry* and the *Laura* were the first big steamers on the Terrebonne in 1881, and also plied bayous Petit and Grand Caillou (Lockport Rotary Club 1994:26). They carried only freight in the early days, and would haul barges loaded with lumber, sugar,

and produce to Houma to be shipped to New Orleans. They would then carry groceries, dry goods and other supplies on the return trip. In the early steamboat days Daigle would dredge the Terrebonne in Houma at his own expense to keep his boats running. He also had a wharf in town where he built barges and had a crew of painters and carpenters to maintain his boats. Emile Daigle had a large interest in the drayage business and owned several landings and wharfs along the Terrebonne by 1910. He was a charter member of the Houma Fish and Oyster Company and had an interest in an oyster shop at Sea Breeze. The *Harry* and the *Laura* also towed long strings of barges loaded with "Beaumont" oil.

Sometimes you could see as many as eight or 10 barges trailing behind one of the big boats. The last barge had a long chain dragging an anchor to keep the tow from swinging. You could always tell where the anchor was by the stream of bubbles [Houma Daily Courier, Sept. 26, 1971].

The *N. H. Breaux* succeeded the *Laura* and was the last steamer on the Terrebonne in 1930 (*Houma Daily Courier*, Sept. 26, 1971).

Some information on commercial traffic on the waterways of the lower Terrebonne region can be obtained from records published by the Corps of Engineers in the Annual Reports of the Chief of Engineers. However, these records are generally available only for the time period after about 1880. One of the area's waterways for which commercial traffic and navigation information are available is Bayou Petit (or Little) Caillou, one of the waterways leading into western Terrebonne Bay. Measuring about 28 miles long, Little Caillou is considered part of the Lafourche system. The upper channel was reportedly filled and was no longer considered navigable by 1882. At that time, the water depth at the channel mouth was from 2 to 11 feet. During the late nineteenth century, several man-made canals, generally about 4 feet deep, connected Bayou Little Caillou with other waterways (ARCE 1882:1413-1414). No information is provided on commerce for Little Bayou Caillou until the 1930s, apparently suggestive of the minimal amount of commercial traffic traveling along the bayou. Data for the year 1935 are shown in Tables 5-2 and 5-3. As can be seen, the vessels used were "motor" vessels and barges and much of the commerce reflected the oystering and shipping activities of the area.

Bayou Grand Caillou is about 28 miles long and empties into Caillou Bay. In 1882, this channel was entirely filled at the upper end and was open with 5 to 8 feet of water throughout most of its lower segment. Vessels traveling on Grand Caillou did not draw more than 7 feet of water (ARCE 1882:1411-1412). No commercial statistics were obtained for this water body for the period prior to 1936.

Bayou Terrebonne represents a major navigable segment of the Bayou Lafourche system. During the early nineteenth century, Houma served as the head of navigation on Bayou Terrebonne. By 1880 the channel above Houma was nothing more than a drainage ditch and was useless for navigation. Below Houma the channel was a shallow tidal bayou. Ultimately, Houma, because of its advantageous location became the major port town in the region. Numerous businesses and facilities for handling boat-borne merchandise developed in the town. As noted earlier, sugar and lumber were major commodities handled at Houma, but many other goods also passed through the town's docks. Castille and Holmes (1983:26) note the importance of the oyster packing industry in the town by the 1920s and report that commodities such as animal furs, cattle and alligator hides and frog legs were packed in barrels with layers of salt and shipped, primarily to New Orleans. In 1880, two steamers traveled the lower end of Bayou Terrebonne "bringing freights from plantations on Terrebonne and other connecting bayous to Houma for shipment by rail" (ARCE 1880:1179-1180).

The greatest part of the freight up the Terrebonne was sugar and molasses from the many sugar plantations in the region. Navigation of the upper end of Terrebonne near Houma was done at high tide, which, depending on the winds in the bays, often gave an additional 2 feet of water. Prior to 1880, commerce on the upper Terrebonne was handled "by flatboats which were cordelled and poled from plantations up to Houma" (ARCE 1880:1179-1180). There was a connection by rail at Houma with Morgan's Louisiana and Texas Railroad where freight was then shipped to market. Schooners and sloops also carried a considerable amount of freight through the bays and connecting bayous to New Orleans (ARCE 1880:1179-1180). Some of these vessels, at times, would have sailed out into the Gulf of Mexico, using one of the several available passes, including Cat Island Pass.

Information on the commercial statistics for Bayou Terrebonne for the year 1915 for registered

Table 5-2. Trips and Drafts of Vessels on Bayou Petit Caillou for 1935 (after ARCE 1936:631).

Draft (feet)	Up-bound			Down-bound		
	<u>Steamers</u>	<u>Motor Vessels</u>	<u>Barges</u>	<u>Total</u>	<u>Steamers</u>	<u>Motor Vessels</u>
6	14	1,203	1,217	1,217	14	1,193
5	200	714	123	1,037	714	113
4	52	353	352	757	52	364
3		1,429	242	1,671		1,429
2			166	264		133
Total	252	2,676	2,184	5,112	252	2,654
						2,193
						5,099
	Total net registered tonnage	3,012	19,577	219,785	242,374	3,012
					19,253	223,840
						246,105

Section included: 36 miles. Controlling depth: 6 1/2 feet. Project depth: Navigation season: Entire year.

(after ARCE 1936:631).

Table 5-3. Commerce on Bayou Petit Caillou for 1935 (after ARCE 1936:627).

		<u>Domestic</u>	<u>In-Bound</u>	<u>Out-Bound</u>	<u>Tons</u>	<u>Tons</u>
Animals and animal products:					Animals and animal products:	
Oysters, unshucked			355		Oysters, canned	80
Shells			2,950		Shrimp, canned	200
Shrimp, dried			26		Shrimp, dried	50
Shrimp, fresh			295		Shrimp, bran	100
Shrimp, bran			70		Wood and paper:	
Nonmetallic minerals:					Cordwood	25
Gasoline			225		Logs, barged	457
Oil, fuel, and gas			1,200		Nonmetallic minerals: Gasoline	50
Oil, lubricating			15		Unclassified: Ice	1,100
Total			5,136		Total	2,062
Value, \$54,0095					Value, \$80,377	
					Total, all traffic	7,198
					Value, \$134,472	
		(after ARCE 1936:627)				

Table 5-4. Commerce on Bayou Terrebonne for 1935 (after ARCE 1936:630-631).

<u>Domestic</u>			
<u>In-Bound</u>	<u>Tons</u>	<u>Out-Bound</u>	
		<u>Tons</u>	
Animals and animal products:		Animals and animal products:	
Fish	1	Dairy products	15
Lard	125	Lard	5
Milk, canned	188	Meat	33
Oysters, unshucked	2,553	Vegetable food products:	
Seafoods, canned	300	Flour and meal	10
Shells	2,600	Fruits and vegetables, canned	56
Shrimp, dried	117	Fruits and vegetables, fresh	50
Shrimp, fresh	2,397	Rice, cleaned	7
Shrimp, bran	147	Sirup and molasses	4
Vegetable food products:		Sugar, raw	8,352
Beans and peas, dried	1,100	Sugar, refined	16
Beverages	115	Sugarcane	5,322
Coffee	200	All other	25
Flour and meal	32	Textiles: Rope	4
Fruits and vegetables, canned	43	Wood and paper:	
Hay and feed	126	Cordwood	30
Oats	25	Lumber	2,000
Potatoes	75	Piling and poles	300
Rice, cleaned	125	Nonmetallic minerals:	
Sugar refined	120	Baroid	1,600
Sugarcane	15,677	Bunker oil	720
Textiles	17	Cement	800
Wood and paper:		Coal, anthracite	100
Logs, barged	457	Drilling mud	20,000
Paper and manufactures	19	Gasoline	459
Nonmetallic minerals:		Grease, lubricating	10
Bunker oil	7,060	Oil, crude	5
Oil, fuel and gas	2,056	Oil, fuel and gas	1,230
Oil, lubricating	160	Oil, lubricating	159
Sand and gravel	6	Salt	15

(continued)

vessels shows a total of 7 steamers and 12 gas boats operating on the bayou at that time. The steamers carried a total of 1,500 passengers. For unregistered vessels there were 375 gas boats and 150 unrigged barges. The freight that was carried during the year

consisted of a variety of articles. The item that had the greatest value was sugar, valued at \$1,132,000. A large quantity of logs was shipped in that year; 15,604,300 feet or an equivalent of 62,417 short tons, reflecting the importance of the timbering industry

Table 5-4. Concluded.

<u>Domestic</u>		
<u>In-Bound</u>	<u>Out-Bound</u>	<u>Tons</u>
		<u>Tons</u>
Ores, Metals and manufactures of:	Ores, metals and manufactures of:	
Iron and steel, manufactured	Iron and steel, manufactured	450
Iron and steel, rolled	Iron and steel, rolled	3,200
Machinery and vehicles: Machinery and parts	Machinery and parts	4,250
Chemicals:	Chemicals:	
Ammunition	Explosives	20
Soap	Soap	3
Unclassified:	Unclassified:	
Matches	Ice	2,671
Roofing	Water, boiler	25,000
All other	All other	1
Total	Total	<u>76,922</u>
	Value, \$407,748	
Value, \$1,244,216		
<u>Up-Bound</u>	<u>Down-Bound</u>	
Vegetable food products:	Vegetable food products: Sugarcane	<u>3,661</u>
Sugar, raw	Value, \$16,474	
Sugarcane	Total, all traffic	<u>129,271</u>
Total	Value, \$4,004,271	

(after ARCE 1936:630-631)

in the early years of this century. Other commodities shipped in large amounts were ground and grain feed, fertilizer, molasses, fuel oil, oysters, potatoes and miscellaneous merchandise. Smaller quantities of brick, cement, coal, cooperage, lime, lumber, machinery, naval stores, pilings and cypress ties were shipped, as well as, agricultural products such as, corn, eggs, furs, fish, hides, moss, oats, rice, salt, and shrimp (ARCE 1916:2449-2450). Between 1888 and 1935 freight tonnage on the Terrebonne increased

from 5,416 to 115,666 tons (Table 5-4). During roughly the same period steamship traffic increased from 15 to 252 trips and barges made from 9 to 2184 trips (Table 5-5). As on other waterways, barges represent the deepest draft vessels by 1935.

These published commercial statistics provide information on the types of vessels and cargoes traveling along the area's waterways, but they do not convey information on the innumerable small craft that were

Table 5-5. Trips and Drafts of Vessels on Bayou Terrebonne for 1935 (after ARCE 1936:631).

Draft (feet)	Up-bound			Down-bound		
	Motor Vessels	Barges	All Other	Total	Motor Vessels	Barges
6	3	157		160	3	157
5	172	138		310	172	138
4	224	121	3	348	224	121
3	656	48	1	695	656	38
2	129	—	11	—	140	—
Total	1,184	465	4	1,653	1,184	465
Total net registered tonnage	5,706	33,077	265	39,048	5,706	33,077
						265
						39,048

Section included: Terrebonne Bay to Terrebonne Bayou, 32.8 miles. Controlling depth: 5 feet. Project depth: 5 feet.
Navigation season: Entire year.

(after ARCE 1936:627-628)

in use. Large numbers of small vessels, many if not most locally made, were in use in the area from the very earliest periods until today. These included such local vessels as pirogues, bateaus, flats, sailing luggers and the like.

Dredging was considered a standard means to improve navigation in the bayous and streams in the area, but other measures were also explored. An interesting observation noted in Bayou Teche was that steamer traffic had a direct effect on the movement of sediments in the channel, especially on the smaller or narrow streams. It was observed that:

Side-wheel steamboats, such as are below New Iberia, and not above, are so constructed that there is a strong current from their wheels washing the bottom from some distance away from the mid-channel out to the banks, but no current at all in the middle, consequently the heavier portion of the material washed up is deposited in mid-channel behind the boat, and the swell of the boat, which is greater than that from a stern-wheel boat, washes the banks, and causes the widening of the surface. The stern-wheel boat spends the force of its engines on the one wheel at its stern, and the current from it washes up the bottom in the center of the bayou only, and the tendency of the heaviest part of the material washed would be to the more quiet water of the sides. So it would have a tendency gradually to improve the navigation, while the side-wheel boat far more rapidly destroyed it [ARCE 1880:1169].

Bayou Terrebonne was once an outlet of the Mississippi River via Bayou Lafourche, but due to a closure at Bayou Lafourche in the years prior to 1880, the upper bayou silted in and navigation above Houma became impossible. Below Houma, Bayou Terrebonne was tidally influenced and became a very important navigable waterway for the large plantations and smaller farms downstream. In a Corps of Engineers survey report in 1880, Bayou Terrebonne was examined in some detail in preparation of dredging the following years. The report notes that the roads along the bayou were useless for moving freight. The best avenue depended on the navigation of Bayou Terrebonne, which also connected with other bayous to get produce to market.

Dredging of the Bayou Terrebonne channel was initiated in 1881. Before completion of the first dredging, the bayou at Houma was reportedly 40 feet wide

and 4 feet deep, and at low water it was only 10 feet wide and 6 inches deep (ARCE 1889:1508). All navigation at the upper end of Bayou Terrebonne was done at high tide. Above the entrance of Bayou Cane the channel was practically dry. The towboat *Harry*, stationed at Houma, sometimes ascended to the mouth of Bayou Cane during high water (ARCE 1887:1397). This towboat was about 18 feet wide and had a draft of only 18 inches (ARCE 1891:1844). The 1881 dredging project created a 6-foot-deep channel below Houma. Local drainage ditch discharges created shoals that again reduced water depths. In 1885 only one or two small steamboats traveled the lower channel (ARCE 1885:1407). Dredging of a 4-foot channel from the mouth to the railroad depot at Houma was begun in 1880 and completed in 1887 (ARCE 1888:1250). By 1886, channel improvements were sufficient to allow one or two small steamboats to periodically run to Houma (ARCE 1886:1265).

A hurricane of September 1909 devastated the riverine system below Houma, clogging all the channels, many with silt as well as trees and debris. Using a prior emergency appropriation authority, the U.S. Army Corps of Engineers dredged 4,500 feet of the Bayou Terrebonne and 4,400 feet in Little Bayou Caillou. The rivers and harbors act of June 25, 1910 created a new project to dredge Bayou Terrebonne, apparently ignoring the other waterways. The purpose of the new program was to dredge a six-foot channel down Bayou Terrebonne from Houma to deep water (ARCE 1912). During the later part of 1915, the dredge *Delatour*, dug a channel from the St. Louis Cypress Company bridge in Houma to Bush Canal, the end of channel improvement. The channel was dug to a depth of 6 feet and a bottom width of 50 feet (ARCE 1916:2449). The Intracoastal Waterway (IWW) was constructed through Houma in 1923 and later extended to Bayou Lafourche in Lafourche Parish (Barton et al. 2003).

In 1930 business leaders convened another meeting to pressure the U.S. Army Corps of Engineers to provide a deep-water channel from Houma to the Gulf (U. S. Congress 1931:5). Major R. F. Fowler prepared a survey and plan for dredging a channel down Bayou La Carpe to Bayou Pelton, and then to Bayou Grand Caillou as far as Dulac. Congress approved a dredging project in the River and Harbor Act approved August 30, 1935. The project was for a five-foot channel from the intersection of Bayou La Carpe with the Intracoastal Waterway at Houma southward within the bayou, utilizing Bayou La

Carpe, Bayou Pelton, and Bayou Grand Caillou to Bayou Dulac. The distance of this project was 16.3 miles. The Corps noted several private wharves along these waterbodies and a number of stiff-leg derricks for handling cane (ARCE 1936: 712-3).

In 1935 a group of Houma businessmen again got together to push for the ship channel south to the Gulf. They published a booklet entitled "Houma Ship Canal" by the Houma-Terrebonne Chamber of Commerce, Julius Dupont, President. John H. Bernhard, 816 Howard Avenue, New Orleans, prepared the study that was to be the basis of the public hearing. Two years later the Houma Harbor and Terminal District issued a report by Frederic R. Harris of New York, in consultation with John H. Bernhard of New Orleans. This report also urged the canal (Frederic R. Harris, Inc. 1937). In February 1939 the Board of Commissioners of the Houma Harbor and Terminal District issued a flyer arguing the case for the HNC. The commissioners were Julius Dupont, President; F. P. Guidry, Vice President; Dr. M. V. Marmande, Treasurer; D. W. Pipes, Secretary; and J. J. Munson. John H. Bernhard was the Consulting Engineer. The flyer explained that current oil development in the parish would expire in fifteen years, and that the Parish must be ready for new business. "We now have rail connections to take care of a Trainload, the Intracoastal Canal to take care of bargeloads, highways to take care of Truckloads, but unless we acquire the Houma Ship Canal to move Shiploads we can never hope for really industrial development" (Board of Commissioners of the Houma Harbor and Terminal District 1939).

Planning for the Houma ship canal were placed on hold during World War II. One of only two blimp naval stations on the Gulf Coast was established at Houma and operated from May 1943 to September of 1944. Blimp squadrons were used to scan the coastline for enemy vessels (Barton et al. 2003).

1954 was the year that the pro-canal forces coalesced once again. On January 13, 1954 the Terrebonne Parish Police Jury appointed several prominent citizens to a Terrebonne Parish Deep Water Channel Committee: M. L. Funderburk, chairman; J. J. Munson, vice-chairman; Louis E. Routier, secretary; Gibson J. Autin, Alvin J. Boudreaux, James J. Buquet, Capt. Ovide J. Cenac, T. B. Holcombe, Butley Mahler, Thaddeus Pellegrin and A. Dupre Vaeth. The U.S. Army Corps of Engineers was interested in the project, but the parish felt a COE project would take too many years of study. The

committee could see the rapid expansion of the oil industry south of Houma and knew the canal project could not wait. \$37,960 in local planning money was quickly raised and led to the passage of a \$3,500,000 bond issue on December 20, 1955 (*The Waterways Journal* 1962:19). The Parish also recruited and received the aid of the State Department of Public Works, which completed many of the surveys for the project.

The next step was to secure a permit to dredge through the marshes from the U. S. Army Corps of Engineers. This process took six months over the winter of 1957-1958, and went smoothly until the Corps brought up the question of increased salt water intrusion into the marshes. On January 6, 1958 Thaddeus M. Pellegrin, President of the Parish Police Jury, wrote to Colonel William Lewis, Chief Engineer of the New Orleans District. He pointed out that for decades the Parish had been trying to secure agreement from among the many parties as to which of the natural bayous to deepenæTerrebonne, Petit Caillou, Grand Caillou, or du Large. Based on the surveys, the Parish had proceeded to acquire ninety-five percent of the land rights for the HNC. The President then objected strongly to the new Corps position regarding salt water intrusion. The objection was received and at the end of the month Colonel Lewis delivered the permit dated January 29, 1958 to the Parish. The permit was in accordance with the State Department of Public Works map entitled "Map of Proposed Houma Navigation Canal, Terrebonne Parish," dated December 1957 (Louisiana State Department of Public Works 1957).

The parish acquired a 600-foot right of way for the Canal, and dug it out initially to a 300-foot top width, 150-foot bottom width and a 16-foot depth. While Houma is seven feet above mean sea level (amsl), the elevation drops to only two feet just one-half mile to the south. For the next twenty-four miles the average elevation is two and one half feet amsl. The final twelve miles of the route were chiefly in open wateræight miles in Terrebonne Bay and four miles in the Gulf of Mexico. The first half-mile of the canal from its intersection with the Intracoastal was dug through farmland. From there the Canal cut through swampland dotted with moss-draped trees. The prime contractor, the Walter P. Villere Company of New Orleans, divided the task into four parts and took on half of it with Villere men and equipment. Villere sublet the southernmost ten miles to F. J.J. Sloat Dredging Company, of Slidell, La. The Sloat firm then sublet a portion of its ten miles to Jahncke

Service, Inc., New Orleans. Villere sublet the seven miles north from the upper end of the Sloat portion to the Monroe J. Wolfe Company, New Orleans.

The Houma Navigation Canal opened in June 1962. The River and Harbor Act of 23 October 1962 (U.S. Congress 1962) authorized the maintenance of a canal 15 feet deep and 150 feet wide from Houma to Cat Island Pass. The total length of the canal was 40.5 miles long with 10 miles in Terrebonne Bay and 3.9 miles in the Gulf of Mexico. In 1973 Congress authorized the deepening of the channel through Cat Island Pass and out to the 18-foot contour line to 18 feet with a width of 300 feet (U.S. Army En-

gineer District 1975: 5). With the opening of the HNC, the intersection of the HNC and the Intracoastal Waterway rapidly became a Mecca for the oil field industry and remains so today. Residents of the project region blame serious flooding in recent years on the Houma Navigation Canal and the lack of levees on Bayou Grand Caillou. Levees have been built along bayous du Large and Petit Caillou. At one time flood gates were planned at Bayou Plat, south of Wax Bayou, but these were never built. Some residents fear more dredging of the HNC until a lock system is in place to protect them from storm surges (Magnus Voisin, personal communication 2003).

CHAPTER 6

RESULTS

This Chapter presents the results of the background research and field reconnaissance conducted for the proposed project. Previously recorded cultural resources in the project region are discussed first. Descriptions of new cultural resources noted during field investigations are then provided.

Known Cultural Resources in the Project Area and Near Vicinity

Archaeological Sites

A review of the archaeological site files at the State of Louisiana Division of Archaeology revealed just three sites actually within the footprint of the proposed construction—16TR12, 16TR18, and 16TR72. Three additional sites in close proximity to the HNC along Bayou Petit Caillou were also noted—16TR13, 16TR14, and 16TR15 (Figure 6-1). All of these sites were recorded well before the creation of the Houma Navigation Canal, and their status was unknown at the start of the present study.

Sites 16TR12 through 16TR15 and 16TR18 were recorded by William McIntire in 1951 and are included in his important work on prehistoric habitation within the changing Louisiana coastal zone (McIntire 1958). All are shell middens on Bayou Petit Caillou that have been extensively eroded leaving, in most cases, only a wave-washed beach de-

posit along the bank of the bayou. Only 16TR12 produced diagnostic ceramics, and these date primarily to transitional Coles Creek and early Plaquemine times, although a few shell-tempered sherds argue for a late prehistoric component as well (McIntire 1958:Plate 13). Neuman classified 16TR12 simply as Mississippian (Neuman 1977:22). 16TR13 and 16TR15, according to Neuman, are Coles Creek in age, while 16TR14 dates to the Plaquemine period. The evidence to support these determinations, however, is not provided. Neuman was unable to date 16TR18 due to a lack of data.

Randolf A. Bazet recorded site 16TR72 on Four Point Bayou in 1953. Jeffery H. Altschul then revisited the site in 1978. At that time 16TR72 was described as a wave-washed and bulldozed shell midden that might retain some physical integrity. Altschul (1978:Table 14) recovered ceramics indicative of a Plaquemine occupation, probably dating between A.D. 1200 and 1500.

All six of these sites were revisited as a part of this study to verify their true locations and determine their current conditions. As noted earlier, all six sites were originally reported over 50 years ago and only one has been examined since then. The main goal of these revisits was to aid in determining the extent of site damage and site loss the project area has experienced since extensive saltwater in-

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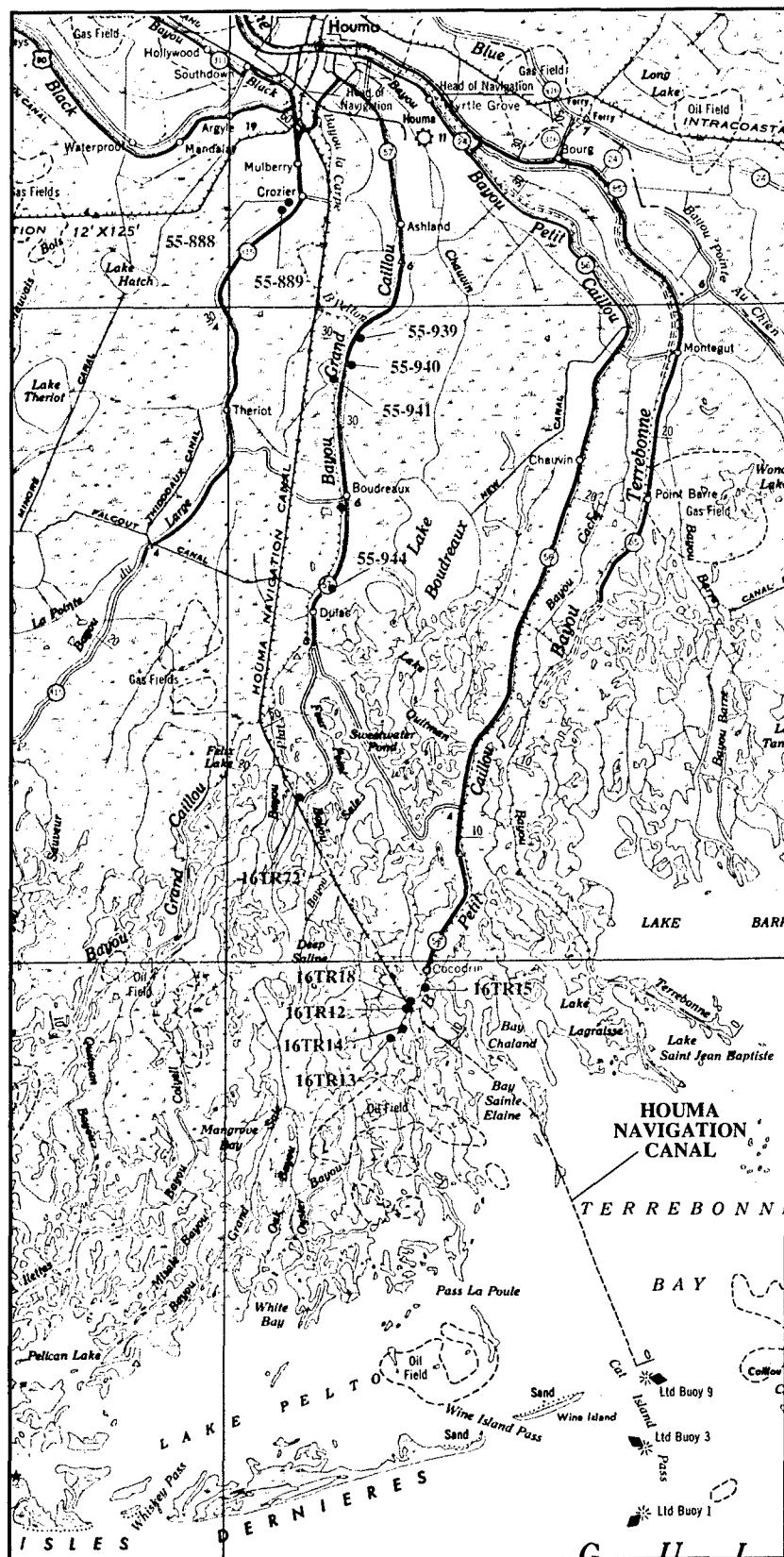


Figure 6-1. Known archaeological sites and standing structures within or immediately adjacent to the project area.

trusion and marsh deterioration began. By comparing the original site descriptions, most of which were made prior to extensive impact from oil and gas activities, with the present natural conditions, a prediction on the extent of damage suffered by other sites in the area might be made.

16TR12 straddles a small point on the northwest corner of the intersection of Bayou Petite Caillou and the HNC (see Figure 6-1 and Plate 5). Wave washed oyster and rangia shell was noted along the banks of both waterbodies (Figure 6-2). Oyster shell is predominant. A single sherd of Baytown Plain, *var. Addis* was collected from the site along the bank of the HNC (Table 6-1).

16TR13 lies on the west bank of Bayou Petit Caillou and has been bifurcated by a canal (see Figure 6-1 and Plate 5). Wave washed oyster and rangia shells were noted on both sides of the canal, and again, oyster shell was most common (Figure 6-3). A moderate amount of pottery ($n=31$) was collected from the east bank of the canal, as well as the vertebra of an immature pig (Table 6-1). The ceramics include Coles Creek Incised, *vars. Hardy* and *unspecified*; Baytown Plain, *var. unspecified*; and Mound Place Incised on a Baytown Paste (Figure 6-4). Several of the sherds from this site are large and not

very water worn, suggesting that some intact portion of the site has only recently begun eroding.

Site 16TR14 lies on the east bank of Bayou Petit Caillou, opposite sites 16TR12 and 16TR13 (see Figure 6-1 and Plate 5). Two exposures of wave-washed shell were noted, again consisting mostly of oyster and some rangia shell (Figure 6-5). Only a single sherd of Baytown Plain, *var. unspecified* was recovered from this site (see Table 6-1).

Site 16TR15, also on the east bank of Bayou Petit Caillou, was the most productive and apparently most intact site examined during this inspection (see Figure 6-1 and Plate 5). The site appeared as a low rise with two tree stumps on it and was surrounded by marsh (Figure 6-6). Oyster and some rangia shell, plus a heavy concentration of both grog-and shell-tempered pottery ($n=80$) were noted on the surface of the site, and not simply at the base of a wave washed bank (see Table 6-1). Grog-tempered types predominate and include: Anna Incised, *var. unspecified*; Baytown Plain, *var. unspecified*; Coles Creek Incised, *var. Hardy*; Mazique Incised, *vars. Manchac* and *unspecified*; and Mound Place Incised on a Baytown Paste (see Figure 6-4). Three body sherds of Mississippi Plain, *var. Yazoo* and a large

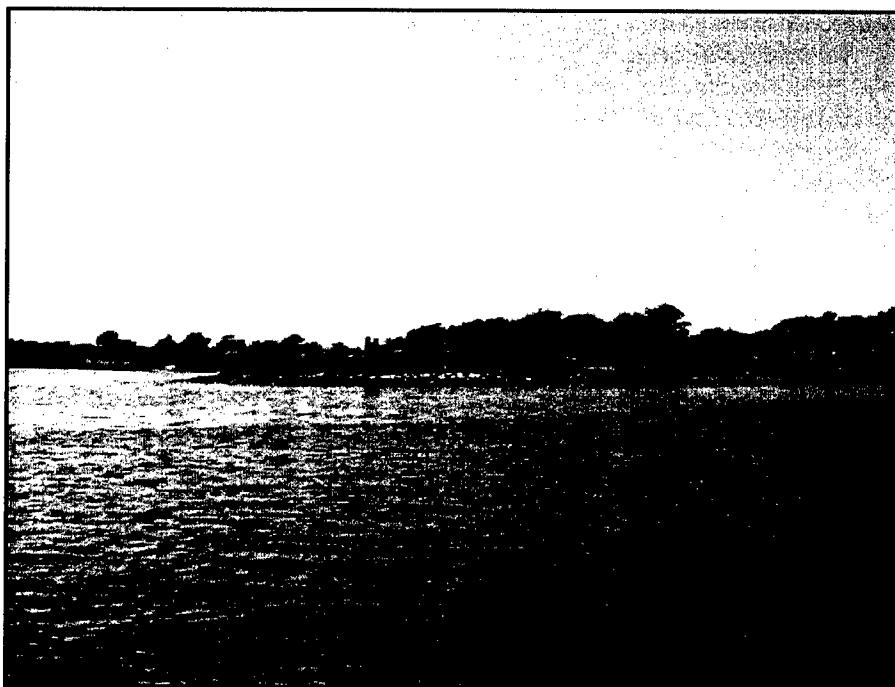


Figure 6-2. Site 16TR12 within the project area. View to the northwest. Date: 10/23/03.

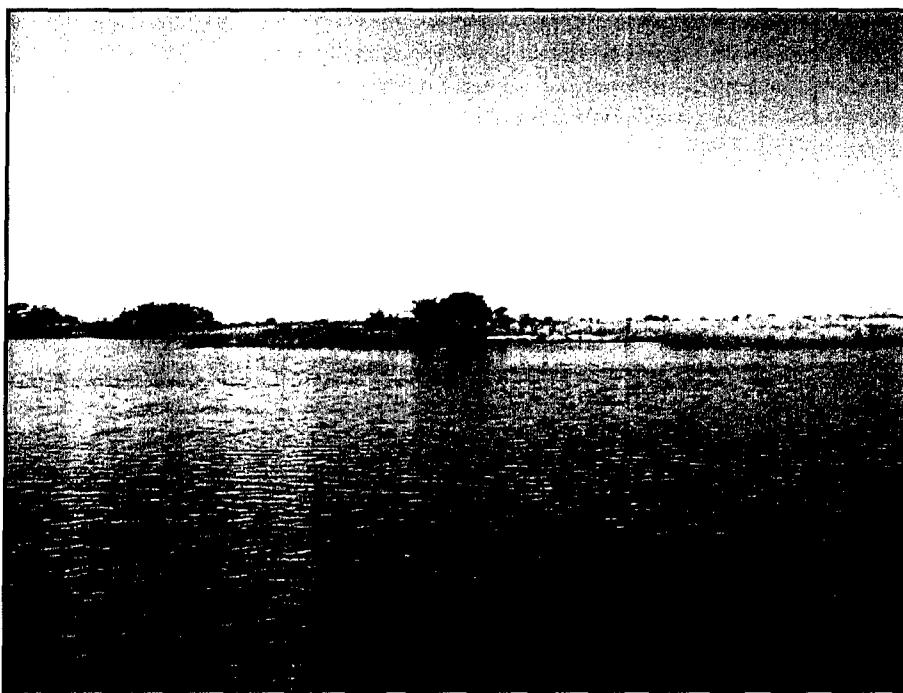


Figure 6-3. Site 16TR13 adjacent to the project area. View to the northwest.
Date: 10/23/03.

piece of daub were also collected. Several of the sherds from this site are large and not very water worn, suggesting that some intact portion of the site has only recently begun eroding. The fact that the shell has not yet leached out of one of the *var. Yazoo* sherds lends credence to this interpretation.

16TR15 also has an historic component represented by a complete molded and lipping-tooled bottle, ironstone plates and saucers, and stoneware crocks and bowls (Figure 6-7). The bottle was produced by the Adolphus Bush Glass Manufacturing Co. in Belleville, Illinois or St. Louis, Missouri between 1886 and 1928 (Toulouse 1972:26). One of the ironstone plate fragments is marked "WAR-RANTED" indicating manufacture after 1890 (Kovel and Kovel 1986:233). This historic material probably represents a fishing camp dating to the late nineteenth and early twentieth centuries.

Located at the northeast intersection of Bayou Petit Caillou and the HNC is site 16TR18 (see Figure 6-1 and Plate 5). Wave-washed oyster with some rangia shell was noted along the banks of both waterbodies (Figure 6-8). Approximately two feet of spoil has been dumped on top of this site in an effort to prevent further bankline erosion. One shard of Baytown Plain, *var. unspecified* and another of

Coles Creek Incised, *var. unspecified* were collected from the bank of the site facing Bayou Petit Caillou (see Table 6-1).

A probable site was also noted on the south bank of Bayou Petit Caillou where it intersects with Little Cocodrie Bayou (see Plate 5). A temporary site number was not assigned to this locale as it lay outside the project area and was not visited during the reconnaissance survey. However, the presence of shell on the bank at the intersection of these two significant bayous strongly suggest that an archaeological site is indeed present there.

The final known site in the project area, 16TR72, lies on the west bank of Four Point Bayou (see Figure 6-1 and Plate 4). This site has apparently been severely impacted by the construction of a wharf and marina (Figure 6-9). No evidence of 16TR72 was noted during this examination, but it is possible that remains survive beneath these modern structures.

Standing Structures

Just 17 structures in Terrebonne Parish are listed on the National Register of Historic Places, and none lie in the proposed project area (Table 6-2). The listed structures consist of two churches, one store,

Table 6-1. Concluded.

POTTERY	16TR12		16TR13		16TR14		16TR15		16TR18		HNC-1		HNC-2		HNC-3		HNC-4		HNC-5		HNC-6		HNC-7		TOTAL	
	Surface																									
Anna Incised	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
var. <i>unspecified</i>	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
bowl																										4
Baytown Plain																										6
var. <i>Addis</i>																										102
unidentified																										
var. <i>unspecified</i>																										
bowl																										
jar																										
Coles Creek Incised																										
var. <i>Hardy</i>																										
bowl																										
unidentified																										
var. <i>unspecified</i>																										
unidentified																										
Mazique Incised																										
var. <i>Manchac</i>																										
jar																										
unidentified																										
var. <i>unspecified</i>																										
unidentified																										
Mississippi Plain																										
var. <i>Yazoo</i>																										
Mound Place Incised																										
var. <i>unspecified</i>																										
(un Baytown Paste)																										
jar																										
unidentified																										
Unclassified Engraved																										
on Baytown Paste																										
Unclassified Incised																										
on Baytown Paste																										
bowl																										
jar																										
unidentified																										
TOTAL	1	32	1	101	2	4	3	6	3	2	1	4	2	1	4	2	1	4	2	1	4	2	1	4	160	

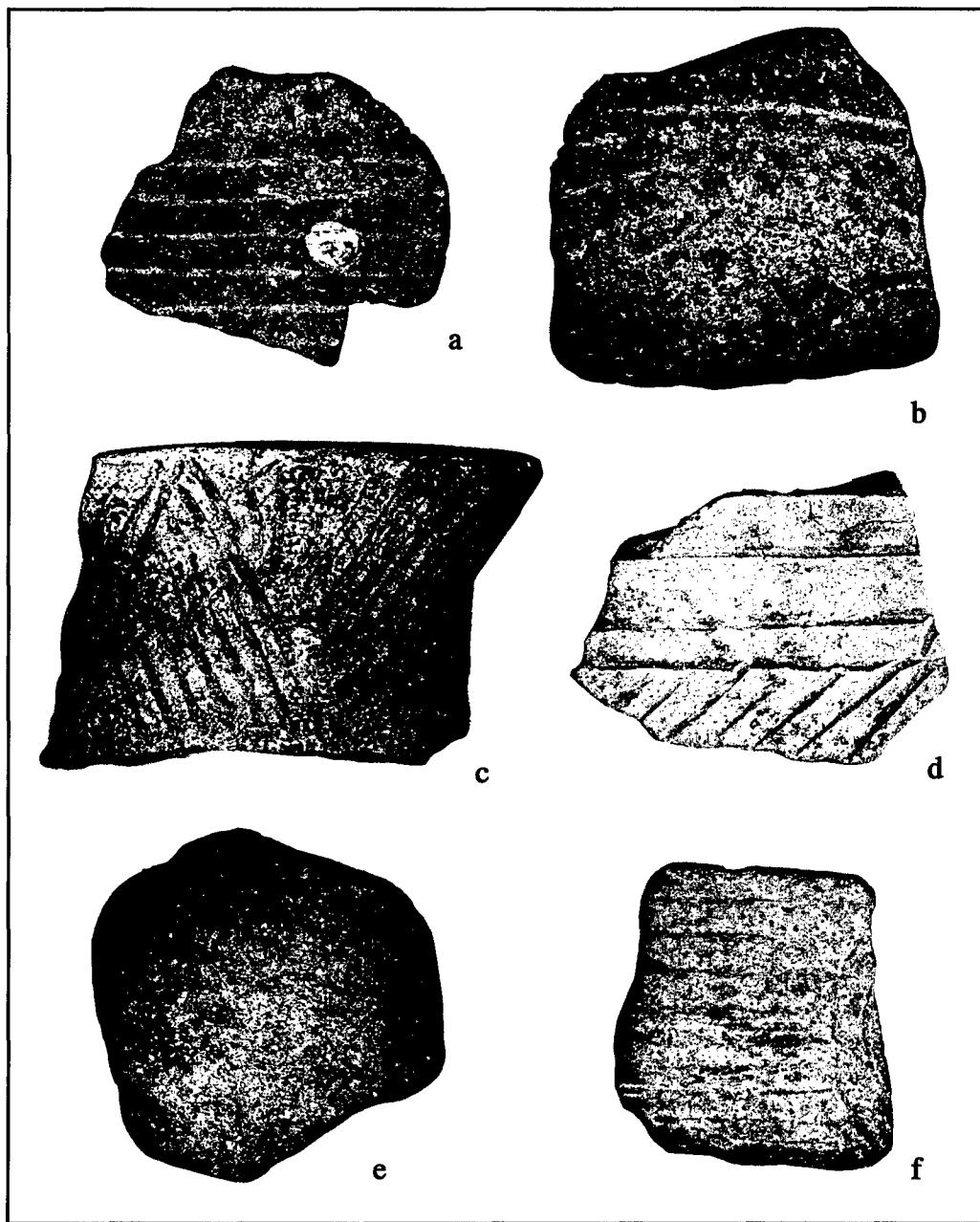


Figure 6-4. Aboriginal ceramics from 16TR13, 16TR15 and HNC-7. a) Coles Creek Incised, var. *Hardy* from 16TR13; b) Mound Place Incised on Baytown Paste from 16TR13; c-d) Mazique Incised, var. *Manchac* from 16TR15; e) Mound Place Incised on Baytown Paste from 16TR15; f) Mound Place Incised on Baytown Paste from HNC-7. Shown actual size.

a school, one historic district, and 12 homes. All are located in cities and towns, principally Houma ($n=10$), Schriever ($n=4$), Thibodaux ($n=1$) Gibson ($n=1$) and Montegut ($n=1$). One of the twelve homes is Robert Ruffin Barrow's Residence Plantation. Barrow also owned Crescent Plantation on Bayou Black in the project area.

A review of the standing structure files at the State of Louisiana Division of Historic Preservation revealed no recorded standing structures actually within the footprint of the proposed construction. However, six structures have been recorded in proximity to the HNC— two on Bayou du Large (55-888 and 55-889) and four on Bayou Grand Caillou

Houma Navigation Canal Deepening Project



Figure 6-5. Site 16TR14 adjacent to the project area. View to the northeast.
Date: 10/23/03.



Figure 6-6. Site 16TR15 adjacent to the project area. View to the southeast.
Date: 10/23/03.

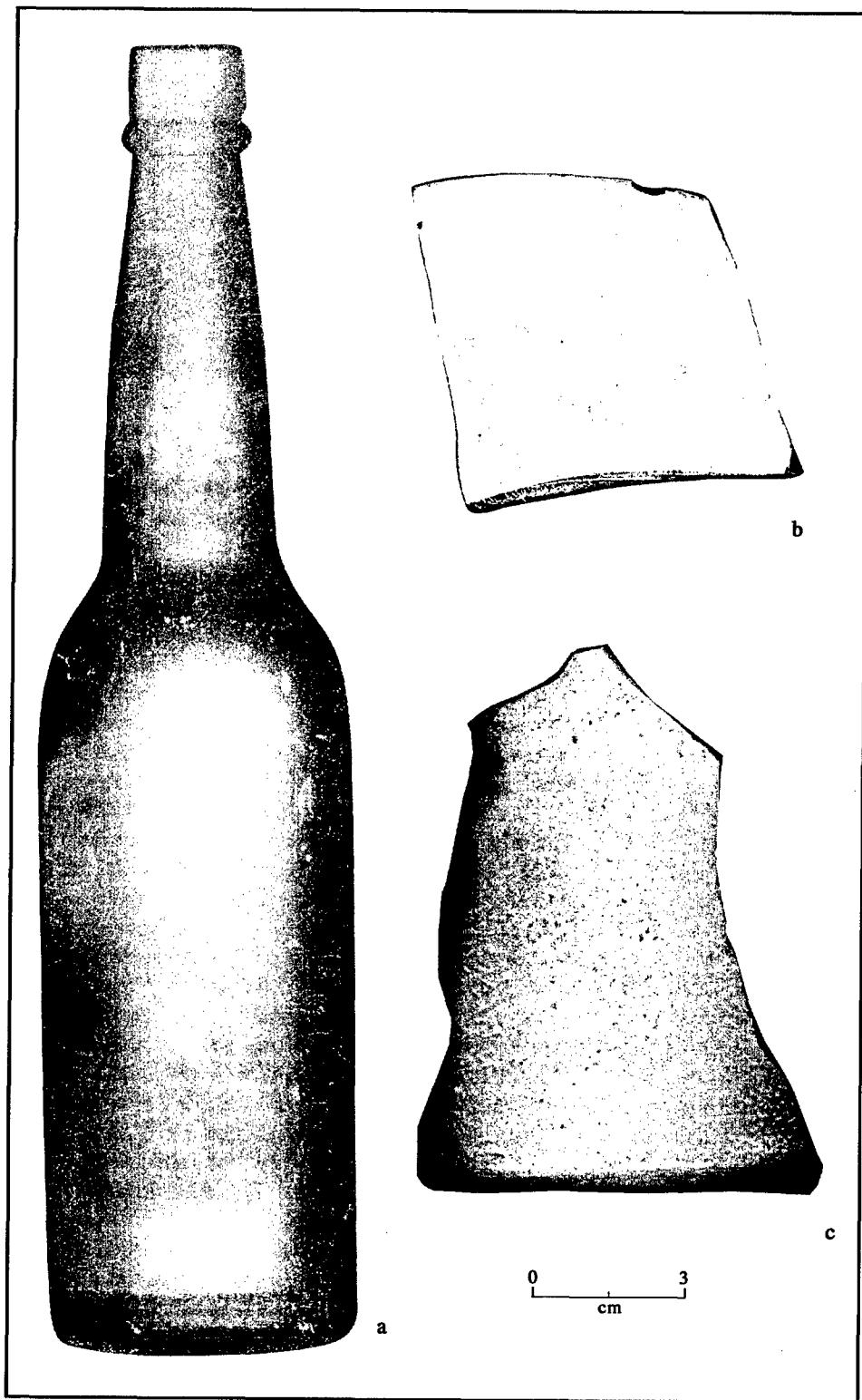


Figure 6-7. Historic artifacts from 16TR15. a) Cup-bottom molded and lipping-tooled clear blue bottle with a crown finish produced by the Adolphus Bush Glass Manufacturing Co. between 1886 and 1928; b) Ironstone plate rim; c) Salt-glazed exterior and slip-glazed interior stoneware crock.

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Figure 6-8. Site 16TR18 within the project area. View to the north. Date: 10/23/03.



Figure 6-9. Site 16TR72 within the project area. View to the northeast. Date: 10/23/03.

Table 6-2. Standing Structures Listed on the National Register of Historic Places in Terrebonne Parish.

NAME	OTHER NAME	CITY	LISTED ON NRHP
Ardoyne Plantation House		Houma	November 1, 1982
Argyle		Houma	July 1, 1994
Armitage		Schriever	April 12, 1984
Clifford Percival Smith House	Walker House	Houma	April 20, 1989
Ducros Plantation House		Thibodaux	November 7, 1984
Gibson Methodist Episcopal Church	Gibson United Methodist Church	Gibson	May 8, 1986
Herman Albert Cook House		Houma	February 24, 1995
Houma Historic District		Houma	December 8, 1983
Magnolia		Schriever	August 4, 1983
Montegut School	Montegut Elementary School	Montegut	October 7, 1983
Orange Grove Plantation House		Houma	March 26, 1980
Polmer Store		Schriever	May 30, 1996
Residence Plantation House		Houma	September 8, 2001
Southdown Plantation House		Houma	January 18, 1974
St. George Plantation House		Schriever	October 5, 1982
St Mathew's Episcopal Church		Houma	May 1, 1989
Wesley House		Houma	August 11, 1982

(55-939 through 55-941 and 55-944). All six are residences recorded by Paul Leslie in May 1981 (see Figure 6-1).

Structures 55-888 and 55-889, the Dover and the Davis houses, are both located on the west bank of Bayou du Large near Crozier. The former is a small, Creole T-plan cottage built around 1900. The Davis house is a Creole L-plan cottage built in circa 1880.

Structures 55-939 through 55-941 are along Bayou Grand Caillou south of Bayou Pelton. Structure 55-939 is a cottage built around 1880, and the Le Blanc House, 55-940, a shotgun structure constructed in circa 1912. These two homes are located on the east bank of Grand Caillou, while 55-941 lies on the west bank. The latter building is a hip-roofed cottage dating from about 1915.

The Bourg House, 55-944, is located on the east bank of Grand Caillou near Dulac and just north of the Falgout Canal. This building is a concrete shotgun house with a Queen Anne style colonnaded porch surrounding two-thirds of the exterior. It was constructed in about 1912.

Shipwrecks

The earliest recorded shipwrecks near the project area appear in documents beginning in 1830s. However, vessels were traveling the area at an earlier date and earlier, unreported losses must be considered to have occurred. The latest recorded shipwrecks appear during World War II and the activities related to German U-boats. Most of these, while near the project vicinity, are located in the offshore Gulf of Mexico in deeper waters. Table 6-3 lists wrecks reported in the vicinity of the project area, derived from information presented in Coastal Environments, Inc. (1977). All wrecks occurring along bayous cut by the HNC are included as their exact locations cannot be pinpointed. However, the likelihood that a significant number of these wrecks occurred at the exact points where the HNC crosses the natural bayous is relatively low.

Yet the historical record of shipwreck losses cannot be used as the only measure of the shipwreck potential of a waterway, and, in fact, it will often be a very unreliable measure of that potential. Pearson et al. (1989:277-279) have noted that the historical record tends to be very biased toward recording losses

Houma Navigation Canal Deepening Project

Table 6-3. Known Shipwrecks in the Vicinity of the Houma Navigation Canal (after Coastal Environments, Inc. 1977).

WRECK NUMBER	BOAT NAME	DATE LOST	LOSS CAUSE	WATERBODY	COMMUNITY	VESSEL TYPE	PUBLISHED REFERENCE	DATE RECORDED	REMARKS
1564 9	UNKNOWN	0/01/1986	UNKNOWN	BAYOU COCODRIE	LAKE BARRE UNKNOWN	F/V DER	USCG, 1986 USCGS, 1934 - LAKE QUIMAN	6/10/1987 10/29/1986	USCG FILE #048-86
110	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #29	2/26/1987	VESSEL PAINTED WHITE WITH RED AND GREEN TRIM; PARTIALLY SALVAGED	
246	SEVEN C	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #3	5/22/1987	VESSEL PAINTED WHITE WITH BLACK TRIM AND A RED BOTTOM; PARTIALLY SALVAGED	
262	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #23	2/26/1987	VESSEL PAINTED WHITE WITH AQUA BLUE-GREEN & RED TRIM; PARTIALLY SALVAGED	
337	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #19	2/26/1987	VESSEL PARTIALLY SALVAGED	
514	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #2	2/26/1987	VESSEL PAINTED WHITE WITH BLUE TRIM; PARTIALLY SALVAGED	
682	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #18	2/26/1987	VESSEL PAINTED WHITE WITH BLUE TRIM; PARTIALLY SALVAGED	
1138	BARBARA MAY	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #25	2/17/1987	VESSEL PAINTED WHITE WITH RED RIGGING; PARTIALLY SALVAGED	
1139	SONNY BOY	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #2	5/22/1987	VESSEL PAINTED WHITE WITH RED AND BLUE TRIM; PARTIALLY SALVAGED; E.H. MARTHIS OWNER	
1145 96	BIGTIMER	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #61	2/17/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED	
1164	CHERAMIE BROS	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #5	2/17/1987	VESSEL PAINTED WHITE WITH YELLOW TRIM; PARTIALLY SALVAGED; LONZO BONVILLIAN, OWNER	
1169	DOLLY K.	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #1	2/17/1987	VESSEL PAINTED WHITE WITH BLUE & GREEN TRIM AND A RED BOTTOM; PARTIALLY SALVAGED	
1172	EVA MARIE	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #28	2/17/1987	VESSEL PAINTED WHITE WITH BLUE- GREEN RIGGING; PARTIALLY SALVAGED	
1184	GRAND CAILLOU	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #53	2/17/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED	
1190	JEP II	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #65	2/18/1987	TRIM; PARTIALLY SALVAGED	
1193	KENNY H	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	TUG FLAYHARTY, 1983; USACE #21	2/18/1987	VESSEL PAINTED WHITE WITH GREEN TRIM; PARTIALLY SALVAGED; PAUL BUSINELLE, OWNER	
1194	LA36AP	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #32	2/18/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED	
1195	LA449VM	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #31	2/18/1987	VESSEL PAINTED WHITE WITH RED TRIM AND AQUA BLUE DECK; PARTIALLY SALVAGED	
1196	LA663VD	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #47	2/18/1987	VESSEL PAINTED WHITE WITH LIGHT BLUE TRIM; PARTIALLY SALVAGED	
1197	LA8LCY	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #6	2/18/1987	VESSEL PAINTED WHITE WITH BLACK TRIM AND BLACK RIGGING; PARTIALLY SALVAGED	

(continued)

Table 6-3. Continued.

WRECK NUMBER	BOAT NAME	DATE LOST	LOSS CAUSE	WATERBODY	COMMUNITY	VESSEL TYPE	PUBLISHED REFERENCE	DATE RECORDED	REMARKS
1205	MARY LEE (LA234CU)	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #20	2/18/1987	2/18/1987	VESSEL PAINTED WHITE W/AQUA TRIM AND GREEN RIGGING; PARTIALLY SALVAGED; ROBERT S.
1209	MISSY JENNIE LA222BG	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #43	2/18/1987	2/18/1987	VESSEL PAINTED WHITE WITH BLUE AND GREEN TRIM; PARTIALLY SALVAGED
1242	RYLA617MJ	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #41	2/20/1987	2/20/1987	VESSEL PAINTED WHITE WITH RED AND AQUA TRIM; PARTIALLY SALVAGED
1264	TRAWLER LA206BE	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #44	2/20/1987	2/20/1987	VESSEL PAINTED WHITE WITH AQUA GREEN TRIM; PARTIALLY SALVAGED POSSIBLE BARGE HULL WITH STEEL FRAME & STEEL CROSS MEMBERS REMAINING, FULL OF WATER
1286	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #7	2/20/1987	2/20/1987	VESSEL PAINTED WHITE WITH RED TRIM AND A LIGHT BLUE DECK; PARTIALLY SALVAGED
1287	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #8	2/23/1987	2/23/1987	VESSEL PAINTED WHITE WITH GREEN TRIM; PARTIALLY SALVAGED
1288	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #9	2/23/1987	2/23/1987	VESSEL PAINTED WHITE WITH AQUA BLUE TRIM; PARTIALLY SALVAGED
1289	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #10	2/23/1987	2/23/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1290	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #11	2/23/1987	2/23/1987	PARTIALLY SALVAGED; PIECE OF THE BOW ONLY REMAINS
1291	UNKNOWN	UNKNOWN	BURNED	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #12	2/23/1987	2/23/1987	USACE REPORT LENGTH AS 30-35'; VESSEL PAINTED WHITE; PARTIALLY SALVAGED; PILOT
1292	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #13	2/23/1987	2/23/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1293	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #15	2/23/1987	2/23/1987	WORK BARGE WITH STEEL FRAME AND STEEL BAR STRUCTURES FOR WOOD COVER (?) REMAINING
1294	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	BGE FLAYHARTY, 1983; USACE #16	2/23/1987	2/23/1987	VESSEL PAINTED WHITE WITH AQUA GREEN TRIM; PARTIALLY SALVAGED
1295	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #17	2/23/1987	2/23/1987	GREEN TRIM; PARTIALLY SALVAGED
1297	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #33	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH GREEN TRIM; PARTIALLY SALVAGED
1298	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #34	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1299	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #35	2/26/1987	2/26/1987	MAST PAINTED BLUE AND WHITE; PARTIALLY SALVAGED
1300	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #36	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH AQUA AND RED TRIM; PARTIALLY SALVAGED
1301	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #37	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH BLUE AND RED TRIM; PARTIALLY SALVAGED
1302	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #38	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH DARK BLUE AND DARK BROWN TRIM; PARTIALLY SALVAGED
1303	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #39	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH AQUA AND RED TRIM; PARTIALLY SALVAGED
1304	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #40	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH AQUA TRIM; PARTIALLY SALVAGED

(continued)

Houma Navigation Canal Deepening Project

Table 6-3. Continued.

WRECK NUMBER	BOAT NAME	DATE LOST	LOSS CAUSE	WATERBODY	COMMUNITY	VESSEL TYPE	PUBLISHED REFERENCE	DATE RECORDED	REMARKS
1305	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #42	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH AQUA BLUE TRIM; PARTIALLY SALVAGED
1306	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	BGE FLAYHARTY, 1983; USACE #45	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1307	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #46	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH RED, GREEN AND ORANGE TRIM; PARTIALLY SALVAGED
1308	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #48	2/26/1987	2/26/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1309	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #49	2/26/1987	2/26/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1310	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #50	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1311	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #51	2/26/1987	2/26/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1312	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #52	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1313	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #54	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1314	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #55	2/26/1987	2/26/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1315	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #56	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1316	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #57	2/26/1987	2/26/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1317	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #58	2/26/1987	2/26/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1318	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #59	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1319	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #60	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1320	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #62	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1321	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #63	2/26/1987	2/26/1987	PARTIALLY SALVAGED; VESSEL BOTTOM AND ENGINE ONLY REMAINING PARTS
1322	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #64	2/26/1987	2/26/1987	PARTIALLY SALVAGED; VESSEL BOTTOM ONLY REMAINING PART
1323	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #66	2/26/1987	2/26/1987	VESSEL PAINTED WHITE WITH RED AND YELLOW TRIM; PARTIALLY SALVAGED
1324	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #67	2/26/1987	2/26/1987	VESSEL PAINTED WHITE; PARTIALLY SALVAGED
1325	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #68	2/26/1987	2/26/1987	PARTIALLY SALVAGED
1326	UNKNOWN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #69	2/26/1987	2/26/1987	VESSEL PAINTED BLUE AND WHITE; PARTIALLY SALVAGED
1529	COMPASS ROSE	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #4	5/22/1987	5/22/1987	PAINTED WHITE W/BLACK & AQUA BLUE TRIM & BLACK RIGGING; PARTIALLY SALVAGED

(continued)

Table 6-3. Concluded.

WRECK NUMBER	BOAT NAME	DATE LOST	LOSS CAUSE	WATERBODY	COMMUNITY	VESSEL TYPE	PUBLISHED REFERENCE	DATE RECORDED	REMARKS
1530	CAPTAIN NOONIE	UNKNOWN	BURNED	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #14	5/22/1987	5/22/1987	VESSEL PAINTED WHITE W/AQUA & RED TRIM & ORANGE RIGGING; PARTIALLY SALVAGED
1531	CAPT JOHN B	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #22	5/22/1987	5/22/1987	VESSEL PAINTED WHITE WITH AQUA & RED TRIM; PARTIALLY SALVAGED; JOSEPH VARNIS PAR
1532	CAPT RIC	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #26	5/22/1987	5/22/1987	VESSEL PAINTED WHITE WITH GREEN TRIM; PARTIALLY SALVAGED; ANDY A. BLANCHARD, OWNER
1533	PELICAN	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #27	5/22/1987	5/22/1987	VESSEL PAINTED WHITE WITH AQUA TRIM; PARTIALLY SALVAGED; ANDREW KWASNY, OWNER
1534	MARY L	UNKNOWN	UNKNOWN	BAYOU GRAND CAILLOU	DULAC	UNKNOWN FLAYHARTY, 1983; USACE #30	5/22/1987	5/22/1987	VESSEL PAINTED WHITE WITH RED & GREEN TRIM; PARTIALLY SALVAGED; ROBERT B. LINER, OWNER
1591	LA 786 XF	0/0/1982	UNKNOWN	BAYOU GRAND CAILLOU	BAYOU PLAT	UNKNOWN	USCG, 1986	6/10/1987	USCG FILE #104-82
1579	UNKNOWN	0/0/1979	UNKNOWN	GIWW	HOUMA	P/C	USCG, 1986	6/10/1987	USCG FILE #128-79
1050	UNKNOWN	8/18/1779	SANK IN STORM	GULF OF MEXICO	ISLES DERNIERES	GLN	CEI #208; MARX, 1971	1/28/1987	BERNARDO DE GALVEZ FLEET; CARRYING \$300,000 IN GOLD & SILVER FOUNDERED IN A HEAVY GALE ABOUT 10 MILES FROM THE MAINLAND; DRAGGED ANCHORS ISLES DERNIERES; 20 KILLED
1056	LIZZIE HAAS	12/11/1902	FOUNDERED	GULF OF MEXICO	WINE ISLAND	UNKNOWN	WPA WRECK REPORT	1/29/1987	
1090	NAUTILUS	8/10/1856	STRANDED & SWAMPED	GULF OF MEXICO	LAST ISLAND	ST	CEI #1106, 1107; LYTHE, 1975	2/5/1987	
1091	STAR	8/10/1856	STRANDED & SWAMPED	GULF OF MEXICO	LAST ISLAND	SSW	BERMAN, 1972; CEI #1255; LYTHE, 1975	2/5/1987	ISLES DERNIERES
1092	TRINITY	11/26/1851	STRANDED & SWAMPED	GULF OF MEXICO	LAST ISLAND	SSW	BERMAN, 1972; CEI #1294; LYTHE, 1975	2/4/1987	ISLES DERNIERES
1093	MINNIE	8/19/1888	UNKNOWN	GULF OF MEXICO	SHIP SHOAL	SCH	BERMAN, 1972; CEI #1074	2/5/1987	
1094	THISTLE	10/25/1877	STRANDED & SWAMPED	GULF OF MEXICO	TIMBALIER ISL.	UNKNOWN	CEI #1233; WPA WRECK REPORT	2/5/1987	STRANDED, RUN ASHORE AT THE WEST END OF TIMBALIER ISLAND
1057	JERRY	5/10/1909	FOUNDERED	GULF OF MEXICO*	TIMBALIER ISL.	UNKNOWN	CEI #1582; WPA WRECK REPORT	1/29/1987	14 MILES OFF TIMBALIER ISLAND; TOOK ON WATER FROM LOOSE BOTTOM PLANK
1565	CINOS	0/0/1986	UNKNOWN	LITTLE COCODRIE BAYOU TERREBONNE BAY	LAKE BARRE	F/V	USCG, 1986	6/10/1987	USCG FILE #205-86
15	UNKNOWN	UNKNOWN	UNKNOWN	LITTLE COCODRIE BAYOU TERREBONNE BAY	TIMBALIER ISL.	UNKNOWN	USCGS, 1938 - TIMBALIER AND TERREBONNE BAYS	11/4/1986	
211	MERCHANT	10/3/1842	STRANDED & SWAMPED	TIMBALIER BAY	WEST TIMBALIER	SSW	BERMAN, 1972; LYTHE, 1975	12/31/1986	OTHER POSSIBLE DATE OF LOSS 10/04/1842, TONNAGE 305, DATE BUILT 1835 (PER LYTHE)

* TERREBONNE/LAFOURCHE/JEFFERSON PARISH

only of large or important vessels. The losses of smaller craft such as those likely to have traveled the bayous in the project area, or vessels that have been abandoned tend to go unrecorded in the documentary record. In some cases, such as during navigation improvements, these previously unrecorded wrecks may get incorporated into the written historical record, particularly if they represent a navigation hazard. However, where these improvements have not been undertaken, or where they have not been documented, even these vessels will go unrecorded (Pearson and Saltus 1991:112).

Wrecks along the HNC proper and postdating 1962 are not included in Coastal Environments, Inc. 1977, but are sure to be common. Thirteen sunken or abandoned craft in the HNC that the U.S. Coast Guard considers navigation hazards appear in Table 6-4. Modern navigation charts depict several wrecks in the vicinity of Cat Island Pass, most of which are probably sunken shrimping or fishing boats. Although the HNC itself ranges from 41 to 46 years old, it is possible that vessels 50 years old or older have been lost in the canal since its opening in 1962.

Pearson et al. (1989) and Birchett and Pearson (1998) mention three vessels reported to have been lost in the near vicinity of Cat Island Pass, the southern extent of the HNC. These are the sidewheel steamer *Merchant*, built in Baltimore in 1835 and stranded on West Timbalier Island in 1842 (Lytle 1975:281); the schooner *Thistle*, built in 1864 and stranded on the west end of Timbalier Island in 1877 (WPA 1938:318) and the *Lizzie Haas*, also a schooner, which foundered in a heavy gale on Wine Island in 1902 (WPA 1938:210). These three boats can be considered somewhat representative of the types of watercraft used in the project area during the historic period.

The Sidewheel Steamer Merchant

The initial enrollment document for the sidewheel steamer *Merchant* was issued at the Port of Baltimore on May 18, 1835, apparently the date of her completion. The owners are listed as William G. Harrison and Gorham Brooks of Baltimore. She is listed as measuring 305 13/95 tons and having one deck, two masts and a square stern, no galleries, no figurehead with a length of 151 feet 8 inches, a breadth of 25 feet 6 inches and a depth of 8 feet 4 inches (Bureau of Marine Inspection and Navigation [hereafter cited BMIN] 1835). The *Merchant* left Balti-

more for New Orleans not long after her construction, because by mid-1836 she was enrolled in the latter city and continued there under different owners for the remainder of her career. The fact that the *Merchant* was fitted with masts would suggest that she was built specifically for operation on the ocean, presumably as a coastal steamer. She is likely to have been built specifically to serve along the coast of the Gulf of Mexico, an area where maritime trade was increasing, particularly, with Texas after her independence from Mexico.

On July 1, 1836, the steamer was purchased by the Merchant Steamboat Company of New Orleans, John Kilshaw, Jr., President (BMIN 1836). Other owners, all residents of New Orleans, were Gregory Byrne in November 1837, Maunsel White and Gregory Byrne in November 1838, Robert Shaw in March 1839, and James Walter Breedlove in July 1839 (WPA 1942:III:144). The *Merchant* was reported stranded on West Timbalier Island on October 3 or 4, 1842, with a loss of 8 lives (Lytle 1975:281). Although reported stranded, no information has been found as to the final disposition of the vessel. The *Merchant* may have been recovered and refloated or she may have broken up. Efforts certainly would have been made to salvage the vessel if conditions permitted, but reports of these types of endeavors rarely find their way into the published record.

The Schooner Thistle

The *Thistle* was a schooner built in 1864 at Mobile, Alabama. Her first known enrollment document was issued at the Port of Mobile on October 1865, with Thomas D. Bell and James Taih listed as equal owners. The *Thistle* had one deck and two masts, a square stern, a cabin on deck and "plain bowhead." She measured 52 33/100 tons in burden and her length was 73 1/10 feet, her breath 21 2/10 feet and her depth 5 7/10 feet. (BMIN 1865). The *Thistle* seems to have been rather typical of the schooners built and used along the gulf coast during the nineteenth century. These shallow draft vessels were the most important carriers of cargo to and from many coastal communities prior to the coming of the steamboat. Even after the steamboat, coastal schooners remained active in certain trades down to the early years of the present century (Pearson et al. 1991). The *Thistle*'s enrollment changed in 1866 when James Taih became sole owner (BMIN 1866). She was sold back to T.D. Bell with a new enrollment, dated December 27, 1871 (BMIN 1871). Another ownership change occurred on September 3, 1872, when Mrs.

Table 6-4. Shipwrecks in the Houma Navigation Canal Listed in the U.S. Coast Guard Database of Navigation Hazards (after U.S. Coast Guard 2000).

ID NUMBER	FILE NUMBER	VESSEL TYPE/NAME	STATUS	WATERBODY	REMARKS
333	008-89	DERELICT BARGE	SUNK	HOUMA NAVIGATION CANAL	
349	009-77	BARGE T-12	SUNK	HOUMA NAVIGATION CANAL	REF 166-88
632	020-82	F/V UNKNOWN	SAVAGED	HOUMA NAVIGATION CANAL	
839	029-83	F/V SUCCESS	SAVAGED	HOUMA NAVIGATION CANAL	3 MI NORTH OF FALGOOUT CANAL
1159	043-86	LAFTITE SKIFF	SUNK	HOUMA NAVIGATION CANAL	JUST WEST OF LT 26
2982	124-76	75FT BARGE	SUNK	HOUMA NAVIGATION CANAL	COULD NOT BE LOCATED
3110	130-79	BARGE UNKNOWN	SUNK	HOUMA NAVIGATION CANAL	3 MI S OF THE HIGHWAY 661 BRIDGE
3148	132-79	BARGE UNKNOWN	SUNK	HOUMA NAVIGATION CANAL	5 MI S OF INTERSECTION WITH ICW
3789	166-88	125 FT DERELICT BARGE	SUNK	HOUMA NAVIGATION CANAL	NOT HAZARD
3892	172-91	LADY GLENIS	SAVAGED	HOUMA NAVIGATION CANAL	
5085	276-84	MR BILL CLARK	SAVAGED	HOUMA NAVIGATION CANAL	
5384	396-85	UNK BARGE	SUNK	HOUMA NAVIGATION CANAL	BAYOU PELTON
6320	NOS115	TWO BARGES	SUNK		AT CROSSING OF HOUMA NAVIGATION CANAL

Jane F. Bell of Mobile became sole owner, possibly when T.D. Bell passed away (BMIN 1872).

In August 1874, Augustus Wakelee of Galveston, Texas, acquired the schooner and she was registered in that city (BMIN 1874:No. 32). In May 1875, Wakelee obtained a "register" rather than an enrollment document for the *Thistle* (BMIN 1875:No. 27). *Registers* were issued primarily for vessels involved in trade with foreign ports. It is most likely that the *Thistle* was sailing to Mexico or to the Caribbean. In 1875, Wakelee enrolled the *Thistle* in Galveston, placing her back into "Domestic Commerce." The description of the *Thistle* also changed to indicate that she now had a "round" stern, suggesting possible repairs or rebuild (BMIN 1875:No. 21). In 1876, C.J. Ranlett of Galveston acquired the schooner (BMIN 1876) and, on May 24, 1877, Edward L. Ranlett of New Orleans enrolled her in that city as the new owner. The master is listed as R. Whiting (BMIN 1877). Her master was an F.E. Castanzi of New Orleans on her passage from Pascagoula to Tabasco, Mexico, when she was stranded on the west end of Timbalier Island at 3 AM on October 25, 1877. The vessel had been run ashore in high winds and very heavy seas. She was listed as a total loss and valued at \$25,000 (WPA 1938:318).

The Schooner Lizzie Haas

The *Lizzie Haas* was another locally built schooner, named after the owner, Mrs. Lizzie Haas of Madisonville, Louisiana. The *Lizzie Haas* was built in Madisonville, Louisiana, in 1882 and enrolled at the port of New Orleans on July 6, 1882, with John R. Haas as master. She was a fairly small vessel, with a burden of 26 62/100 tons, a length of 59 2/10 feet, a breath of 21 5/10 feet, and a depth of 4 3/10 feet. She had one deck and two masts with a plain head and a square stern (BMIN 1882). A new enrollment was issued on March 14, 1883, when ownership of the vessel changed to Juan Gener of New Orleans. There are a couple of interesting notes on the new enrollment. The tonnage capacity was reduced to 25 29/100 tons for deductions allowed under an Act of August 5, 1882. There was also a notation of \$14.43 paid for the 5 officers and crew for "Hospital money" for the period since July 6, 1882 (BMIN 1883).

Another enrollment was issued April 28, 1892, listing a new owner and master, James C. Weaver of New Orleans (BMIN 1892). James Weaver made some changes to the *Lizzie Haas* that required a new

enrollment on May 13, 1895. She now had a modeled bowhead and her tonnage increased to 34 9/100 tons, plus 2 2/100 tons for "head room" for enclosures on the upper deck. The gross tonnage of 36 11/100 was decreased to a net tonnage of 20 76/100 tons allowed for "Deductions under Section 4153, Revised Statues, as amended by Act of March 2, 1895." Her deductions included 6 10/100 for crew space, 6 73/100 for master's cabin, 1 63/100 for boatswain's stores and 89/100 for storage of sails (BMIN 1895). A new enrollment was issued for the schooner on March 16, 1899, for her owner and master, John Millot of Madisonville (BMIN 1899). On a voyage on December 11, 1902, from Bayou Grand Caillou to New Orleans, she foundered in a heavy gale on Wine Island. She dragged her anchors, but was unable to save herself from sinking. She was a total lost, valued at \$2,500 (WPA 1938:210).

New Cultural Resources Noted in the Project Area

When in the project area to examine previously recorded cultural resources, several new archaeological sites, standing structures, and shipwrecks were noted, visited and photographed. In addition, numerous localities along the banks of the HNC that exhibit shell were plotted on the project plans as potential sites, but not examined further (see Plates 1 to 5).

Archaeological Sites

Seven unrecorded archaeological sites were noted along the HNC during the course of these investigations (Figure 6-10 and Plates 1 to 5). HNC-1 was located on the east bank of the HNC opposite proposed dredge spoil Site 5 (Figure 6-10 and Plate 1). A heavy concentration of shell was noted along approximately 125 m of the bank where the HNC cuts across Bayou La Carpe (Figure 6-11). Mostly rangia shell with some oyster was also noted in the cutbank. Four sherds of Baytown Plain, var. *unspecified* were recovered from the site (see Table 6-1). Three other shell concentrations were noted opposite HNC-1, on the east bank of the HNC and in Site 5 (see Plate 1). All of these locales occur where the HNC has truncated a meander of Bayou La Carpe.

HNC-2 was located downstream of HNC-1 and also on the west bank of the canal, north of proposed dredge spoil Site 8 (see Figure 6-10 and Plate 1). Here again the HNC clips a meander of Bayou La Carpe near where it once intersected with Bayou

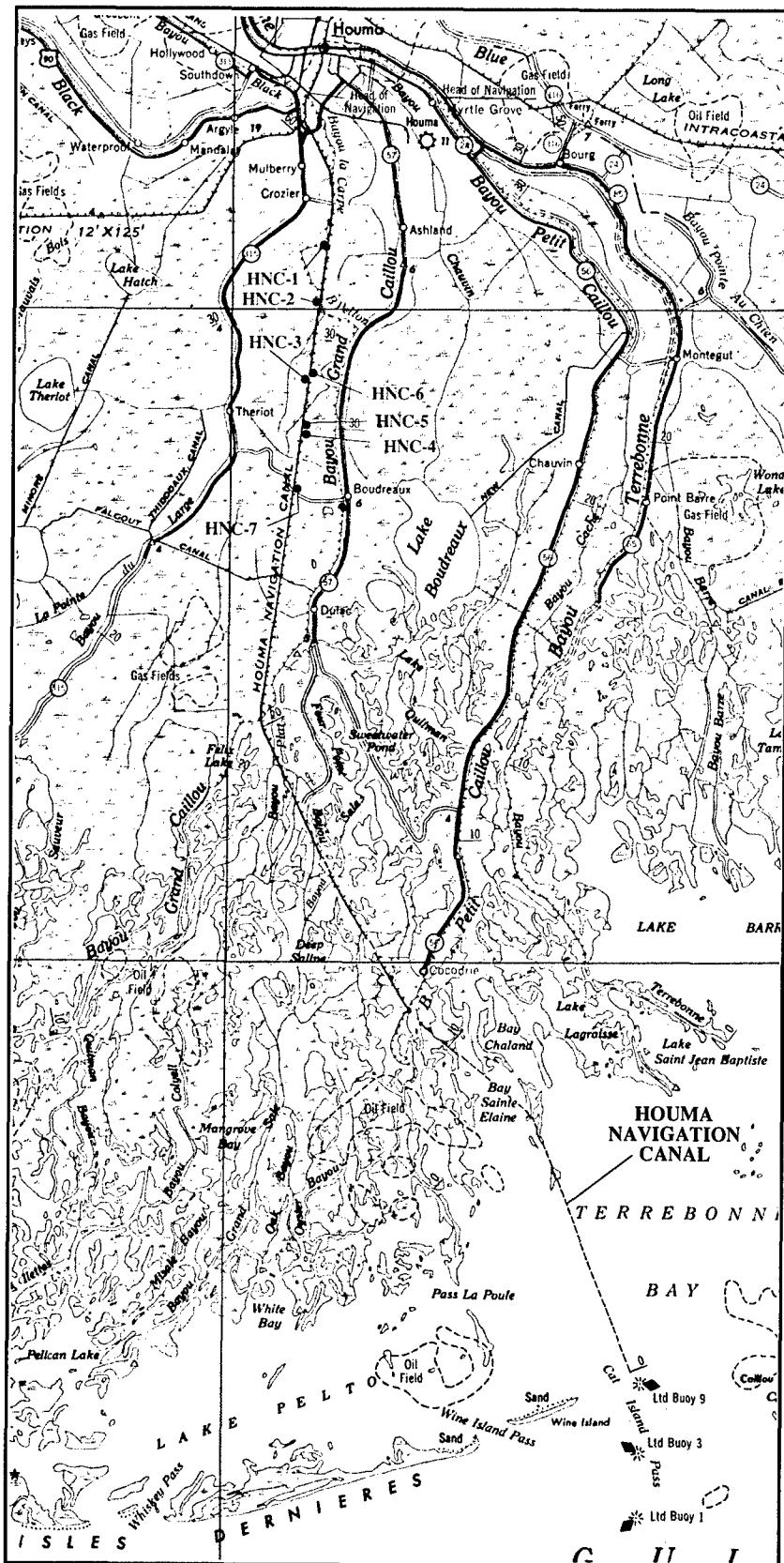


Figure 6-10. New archaeological sites within the project area.



Figure 6-11. HNC-1 on the west bank of the Houma Navigation Canal. View to the northwest. Date: 10/21/03.

Pelton. Shell, rangia and some oyster, was noted from the Bayou La Carpe intersection south to an excavated well slip (Figure 6-12). Shell was noted in the cutbank and as a wave-washed deposit at the base of the bank at HNC-2. Three sherds of Baytown

Plain, *var. unspecified* were recovered from the wave-washed deposit (see Table 6-1).

Another patch of shell was also noted south of HNC-2 from the well slip down to where a pipeline

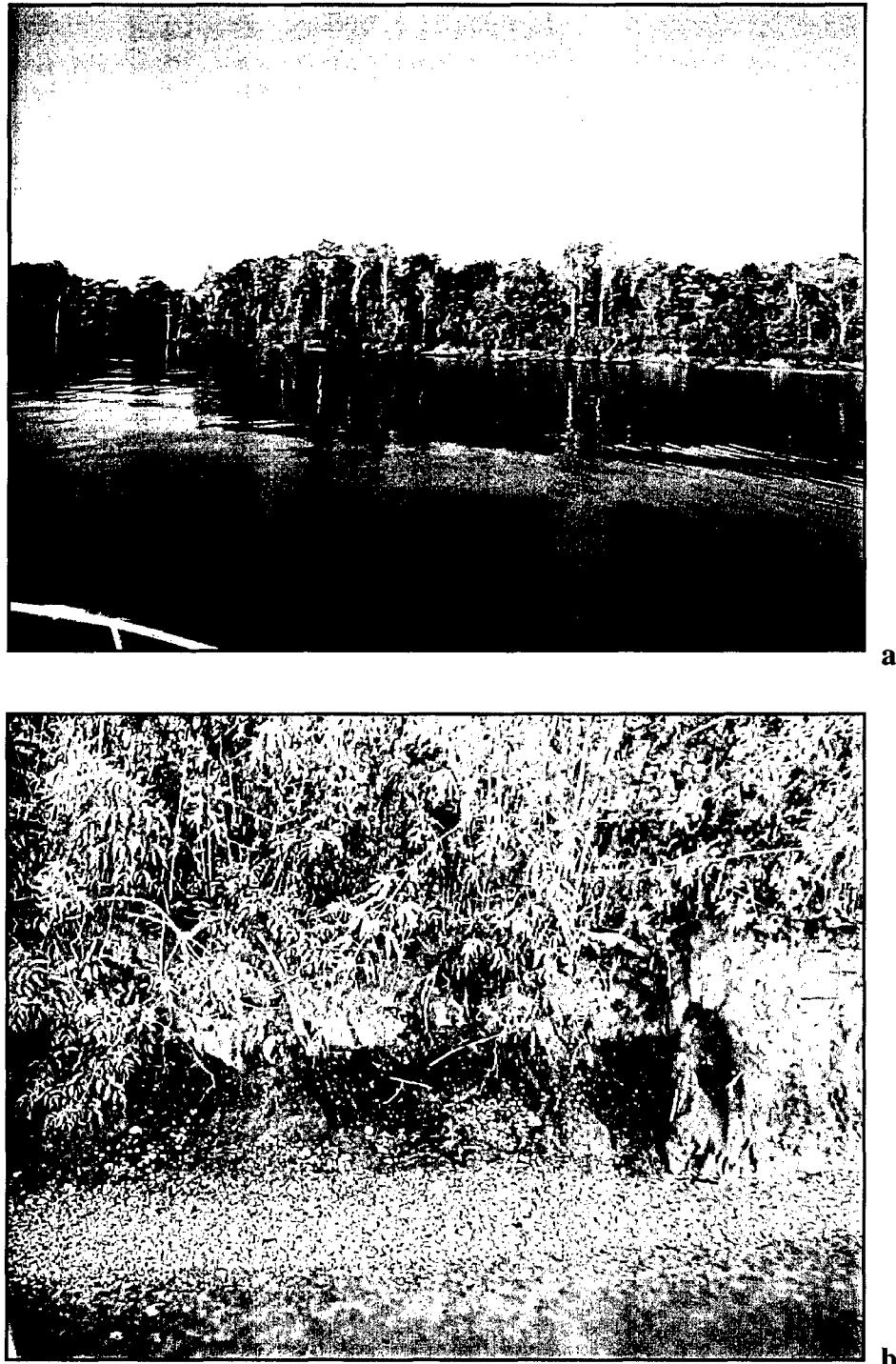


Figure 6-12. HNC-2 on the west bank of the Houma Navigation Canal. View to the southwest (a) and northwest (b). Date: 10/21/03.

crosses the HNC (see Plate 1). Opposite HNC-2, on the east bank of the HNC, two large oak trees in an undisturbed cypress swamp were noted along the proposed access route to dredge spoil Site 6A. Shell was also noted along the bank in this location, and three others to the south between Bayou Pelton and

the pipeline (see Plate 1). All of these deposits occur where the HNC has cut across Bayous La Carpe and Pelton.

Proceeding south down the HNC, patches of shell were noted south of the intersection with 40 Acre

Bayou and dredge spoil Site 8 (see Plate 2). Two lie on the west bank and the third immediately opposite them on the east bank. All occur where the HNC crosses Bayou Boeuf.

Two new sites were located down the canal in and opposite proposed dredge spoil Site 9—HNC-3 on the west bank and HNC-6 on the east bank (see Figure 6-10 and Plate 2). Both sites occur south of a second pipeline crossing, where the HNC cuts across another branch of Bayou Boeuf. At HNC-3, rangia and some oyster shell was noted on the bank extending from the pipeline crossing south to the intersection with Bayou Boeuf (Figure 6-13). Large oak tress and palmetto were noted in an undisturbed cypress swamp at this location. Shell was also recorded at the pipeline crossing to the north of the HNC-3, but this appears to have been dumped there to prevent bankline erosion. Although little shell was noted in the cutbank at HNC-3, six sherds of Baytown Plain, *var. unspecified* were recovered from the site (see Table 6-1).

George Castille of CEI visited HNC-3 on February 28, 2000 while in the course of another field project. His collection of surface artifacts from the site was analyzed by Doug Wells, also of CEI, and subsequently returned to the property owner (George Castille, personal communication 2003). The assemblage included: a Plaquemine Brushed, *var. Plaquemine* rim sherd; one Rhinehart Punctated, *var. unspecified* rim; a Mazique Incised, *var. Manchac* rim; a body sherd of Coles Creek Incised, *var. Hardy*; one Mississippi Plain, *var. unspecified* body sherd; five Baytown Plain, *var. Addis* body sherds; three unidentified rim sherds; and 18 unidentified body sherds. Wells estimated the date of the assemblage to be A.D. 1200 to 1350, therefore encompassing Plaquemine culture and the early Mississippi Period.

Site HNC-6 lies at the northwestern corner of dredge spoil Site 9, opposite HNC-3 and immediately south of the pipeline crossing (see Figure 6-10 and Plate 2). A thin lens of small rangia and some oyster shell was noted in the bankline at this site (Figure 6-14). Shell was also abundant on the bank and as a wave-washed deposit at its base. The only artifact collected from the site is the sawn vertebra of an immature pig (see Table 6-1).

Sites HNC-4 and HNC-5 lie on the east bank of the canal where it again crosses Bayou Boeuf (see Figure 6-10 and Plate 2). HNC-4 is located in dredge spoil Site 10 and HNC-5 in Site 9. The artificial

slip that separates the two sites is the proposed access route to dredge spoil Sites 9B and 10B. Redeposited midden is clearly evident at both sites and probably represents spoil from the slip excavation (Figures 6-15 and 6-16). It is probable that HNC-4 and HNC-5 represent the northern and southern edges of the single site disturbed by the slip excavation. Three sherds of Baytown Plain, *var. unspecified* were found at HNC-4 and two others at HNC-5 (see Table 6-1).

At the southern end of dredge disposal Site 10 and opposite dredge spoil Site 13A, rangia shell was noted along the east bank of the HNC (see Plate 2). This deposit also seems to be associated with a branch of Bayou Boeuf, the remnants of which are evident in dredge spoil Site 13A. Shell deposits were also mapped on both banks of the HNC, north and south of Bayou Provost (see Plate 2). On the west bank one deposit is immediately adjacent to dredge spoil Site 13B, while another is within dredge spoil Site 12A. On the east bank one deposit is bisected by the proposed access route to dredge spoil Site 13 and the other by the access route to dredge spoil Site 12.

HNC-7 lies on the east bank of the HNC where it intersects Bayou Guillame (see Figure 6-10 and Plate 2). Cypress trees and a telephone pole occur on the site, and a large pile of trash has been dumped to its immediate north (Figure 6-17). While the west bank of the Bayou Guillame intersection has been buried by riprap, the stumps of dead trees of a former cypress swamp and two shell deposits are evident along the canal bank immediately north of the riprap (see Plate 2). Site HNC-7 contains rangia, plus some oyster shell, and produced a sherd each of Baytown Plain, *vars. Addis* and *unspecified*; Unclassified Incised on Baytown Paste; and Mound Place Incised on Baytown Paste (see Table 6-1 and Figure 6-4). Another shell deposit was recorded south of HNC-7 and the road parallel to Bayou Guillame (see Plate 2).

Proceeding south down the HNC, shell was noted on the east bank of the canal beginning north of Existing Disposal Area E14 and extending to approximately 300 m north of the artificial slip bisecting Existing Disposal Area E14 (see Plate 3). Much of the west bank in this area has been buried by rip rap; however, cypress stumps and shell are evident beginning immediately south of the rip rap and extending to just beyond the artificial slip on the opposite bank of the HNC (see Plate 3). These large



Figure 6-13. HNC-3 on the west bank of the Houma Navigation Canal. View to the northwest. Date: 10/22/03.

Houma Navigation Canal Deepening Project



a



b

Figure 6-14. HNC-6 on the east bank of the Houma Navigation Canal. View to the northeast (a) and southeast (b). Date: 10/22/03.



Figure 6-15. HNC-4 on the east bank of the Houma Navigation Canal. View to the northwest. Date: 10/22/03.



Figure 6-16. HNC-5 on the east bank of the Houma Navigation Canal. View to the northeast. Date: 10/22/03.

shell deposits appear to be associated with occupations located on a former crevasse of Bayou Grand Caillou.

Two additional shell deposits were noted where the HNC intersects with the Falgout Canal (see Plate 3). These both occur in Existing Disposal Area E15C. Although the banklines of the HNC were not examined in such detail south of the Dulac pontoon bridge, additional shell deposits are bound to exist in this southern portion of the project area as well.

Standing Structures

The only standing structures noted in the project area during this preliminary investigation are: the Dulac pontoon bridge; a wooden shed and abandoned wooden dock on the east bank of the HNC just south of Bayou Guillame; and three metal storage tanks in Existing Disposal Area Site E14 on either side of the old crevasse channel of Bayou Grand Caillou (see Plates 2 to 3). The bridge is clearly associated with the canal and so is not quite old enough to be considered for the NRHP. However, the bridge and the canal itself will be 50 years old in just four to nine years, and will need to be evaluated for future projects. The metal storage tanks are probably con-

temporary with the canal, but will need to be examined to determine their age. One is currently being tipped into the canal due to bankline erosion (Figure 6-18). The wooden dock and shed also require further investigation. As they are located close to Bayou Guillame, there is a remote possibility that they predate the HNC.

Shipwrecks

Two derelict vessel locales were noted in the HNC during these investigations (see Plates 2 and 4). The northern most is a metal barge with a wooden shrimp boat on top of it, lying at the canal intersection with Bayou La Carpe (Figure 6-19). The barge portion of the double wreck appears to correspond to obstacle 3110 listed in Table 6-4. The second vessel locale is probably a metal barge abandoned at the canal intersection with Bayou Provost (Figure 6-20). Obstacle 632 in Table 6-4 apparently corresponds to this wreck. As both of these shipwreck sites occur where the HNC crosses natural waterways, they should be examined to determine if they are 50 years old or older. Other wrecks not visible above water clearly exist in the HNC (see Table 6-4). One possible location for unrecorded wrecks is in association with the wooden dock described above and located near Bayou Guillame (see Plate 2).

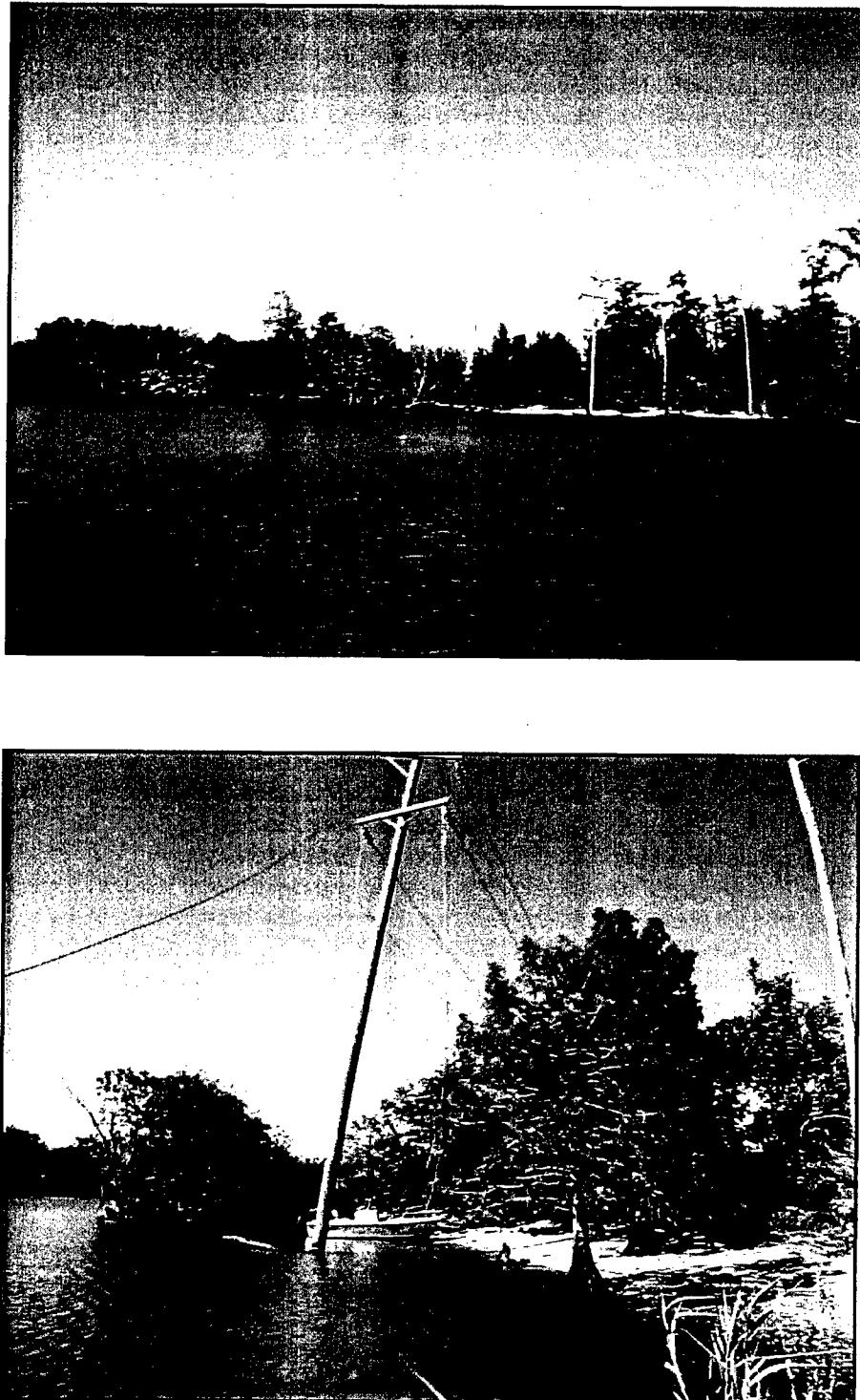
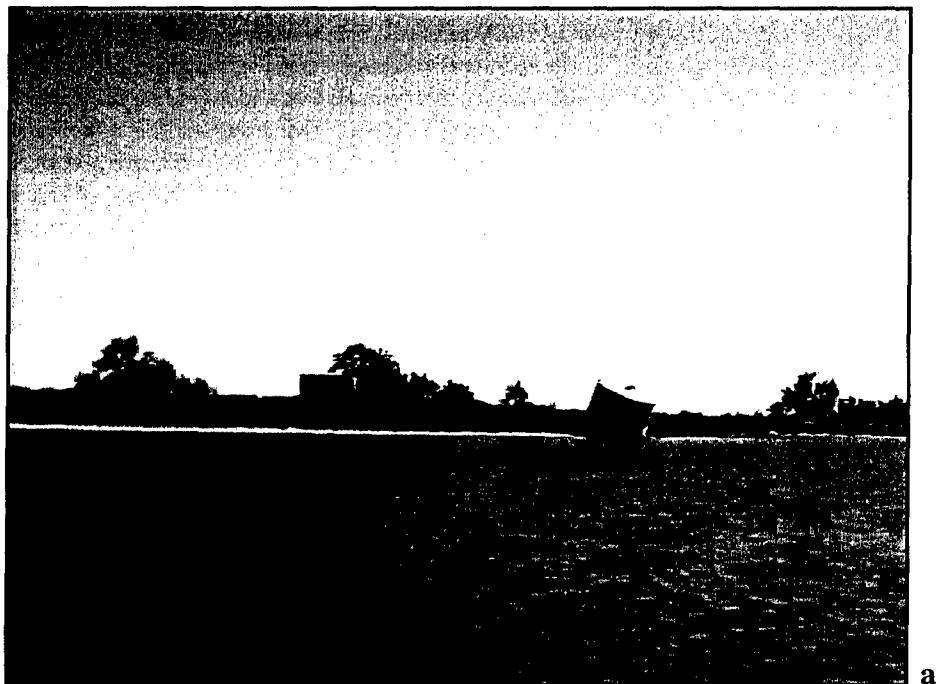


Figure 6-17. HNC-7 on the east bank of the Houma Navigation Canal. View to the northeast. Date: 10/22/03.

Houma Navigation Canal Deepening Project



a



b

Figure 6-18. Storage tanks in Existing Disposal Area Site E14. View to the south-east (a) and northeast (b). Date: 10/22/03.

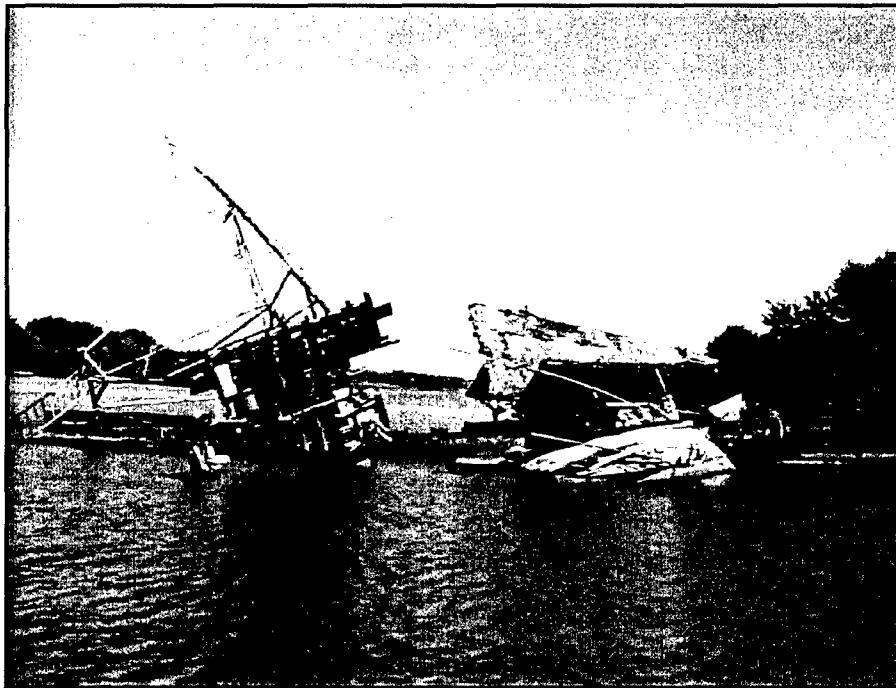


Figure 6-19. Barge and shrimping boat wreck at the intersection of the Houma Navigation Canal and Bayou La Carpe. View to the north. Date: 10/21/03.



Figure 6-20. Barge wreck at the intersection of the Houma Navigation Canal and Bayou Provost. View to the northeast. Date: 10/22/03.

CHAPTER 7

RESEARCH DESIGN

Research Topics

The previous chapters on the environment and sequence of cultural development have raised a number of questions about human adaptation in the project region. These generally concern culture history, settlement systems, and demography. The sources used to form these questions include general models of the behavior of hunter-gatherers (Binford 1980; Jochim 1976) and agriculturalists (Rappaport 1968); previous archeological research within the Lower Mississippi Valley (Phillips 1970; Weinstein et al. 1979a), particularly within the Mississippi Deltaic Plain (Kniffen 1936; McIntire 1958; Gibson 1978b; Gagliano et al. 1979; Wiseman et al. 1979; Gagliano 1984; Goodwin et al. 1985b); and the work of cultural geographers in southern Louisiana (Knipmeyer 1956; Rehder 1971; Comeaux 1972).

Culture History

Gaps in our current understanding of the aboriginal culture history of the region are numerous. For instance, relatively few Archaic, Poverty Point and Tchula period occupations are known within the study area, although relict Teche-Mississippi deltaic deposits do exist there. For the Marksville period, it remains uncertain why the Mandalay phase shows greater similarities to Marksville assemblages far-

ther up Bayou Teche than to those east of the study area in the Barataria Basin and the St. Bernard marshes. Conversely, why the Coles Creek phases identified within the study area show greater similarities to Coles Creek assemblages located to the east in the Lafourche Delta than to those further upstream along Bayou Teche remains unclear.

While Mississippi period occupations are common within the study area, most reflect Plaquemine culture and contain relatively few shell-tempered ceramics. Whether these shell-tempered ceramics represent cultural interaction such as trade or the presence of Mississippian culture groups has not been firmly established. Historic period occupations related to the Chitimacha and Houma tribes are certainly present within the study area. However, their date, distribution and character have not yet been defined.

For all the periods, more data is needed from more sites. Canal banklines which cut buried or subsided Teche distributary natural levees could be surveyed and auger cores taken to identify the landforms with which the earliest sites are associated. Additional ceramic collections and analyses from in and outside the region are necessary to elucidate the influences at work during the Marksville, Coles Creek, and Mississippi periods. Only comprehensive survey will find the sites and data needed to

initiate understanding of the native population in the early historic period.

Settlement Systems

Previous archeological and geographical research in Terrebonne and adjacent coastal parishes suggests that certain aspects of human adaptation to the deltaic plain have remained consistent due to the environmental constraints the region presents. In particular, the spatial relationship of settlements to the landforms or depositional environments of the deltaic plain exhibits marked continuity through time.

Certain features, especially elevated natural levees, appear to have been the predominant location of human habitation sites for all periods (Kniffen 1936; Knipmeyer 1956; McIntire 1958; Gagliano 1984; Gagliano et al. 1979). Several factors are responsible for this pattern. First, in many cases natural levee ridges were the only elevated and relatively well-drained terrain available. In this regard they provided a base for dwellings and land for agricultural fields. Natural levees also represented an important habitat for terrestrial game, as well as a source for raw materials. A third factor contributing to their extensive use by human groups was their proximity to open water. This was important not only for human subsistence, but for transportation as well.

The state of the channel adjacent to the natural levee was apparently a key factor in the choice of where to live. If the channel was still part of the active delta then flooding may have been severe enough to prevent permanent or even semi-permanent occupation. However, if the channel had been abandoned, then long-term habitation may have been possible. The cycle of biological succession within the surrounding delta, which determined the productivity of the nearby swamp and marsh environments, was also of great importance (Gagliano and van Beek 1975).

Relict beaches or barrier islands were also chosen for habitation (Shenkel 1974:41; Brown 1984:100). These features are much less common than natural levees, so that the number of sites actually associated with them is much smaller. In addition, they often did not provide the expanse of elevated, well-drained land available on natural levees.

Other depositional environments found within the deltaic plain, including active and abandoned channels, swamps, marshes, active beaches, lakes

and interdistributary bogs, served primarily as resource extraction zones or transportation routes and were seldom the location of habitations until the advent of recent technologies for flood-proofing structures. Exploitation of these environments often took place from settlements located on nearby natural levees or relict beaches, but may also have involved the short-term use of resource extraction sites. This type of site would be located not only in depositional environments unsuitable for long-term habitation, but also along natural levees or relict beaches beyond the range of habitation sites.

Several questions persist concerning site location in the deltaic plain. For example, do human habitation sites in the deltaic plain generally occur on relatively stable, elevated landforms (in this case natural levees and relict beach ridges), while short-term resource extraction sites occur in a variety of depositional environments? Also, are the majority of prehistoric habitation sites within the study area associated with relict deltaic features rather than active ones, and if so are resource extraction sites associated with both environments? Determining the function of sites in the project region, as well as the landforms with which they are associated should help clarify some of these issues.

More data are also needed to determine how site function, size, and distribution varied over time. Determining the size of Archaic and Poverty Point period occupations within the study area and collecting floral or faunal remains which may provide seasonality information would help determine if all the Archaic and Poverty Point period components within the study area were small and occupied seasonally. The size, depth of deposit, and artifact assemblages from later sites of the Tchula, Marksville, and Coles Creek periods would reflect the presence of semi-permanent or permanent villages, resource extraction sites, and also centralized burial and platform mounds. The type, size and distribution of these sites and the landforms they occur on might also provide information on an emerging site hierarchy. Similar data would be needed from Mississippi period sites in order to identify agricultural hamlets and small political polities.

Information is also lacking on the size and number of historic aboriginal components within the study area and their associated artifact assemblages. Archaeological data could be supplemented by oral histories in the case of the Houma. Colonial, Antebellum, Postbellum, and Modern period components

in the study area could provide information on the size, number, and types of structures and artifact assemblages distinctive of each era. Cartographic and archival information could serve as a supplement to the archaeological data collected.

Demography

The general belief is that population increased over time in the project region. Size data from sites in the study area are necessary to verify and document this pattern. Once components at each site are identified, an assessment of the change in total area occupied could be determined by culture or by century.

Paleogeography

Archaeological sites with dated occupations in the project area could also be used to refine our knowledge of the age of specified watercourses in the area. This information then might address the age and duration of specific elements (delta lobes/sublobes, distributary segments, etc.) of the Teche and Lafourche delta systems.

Field Methods

The research topics outlined in the previous section involve generalizations concerning human occupation of the study area in the past. Although the proposed project area is narrow and very tightly defined, data collected there would nevertheless increase our understanding of human habitation in the deltaic plain. So little comprehensive survey has been conducted in the region that all new data collected would be of great value. Also, the sites that can provide this data are a fleeting resource, given the rapid rate of land loss in the region over the last 50 years. The field methodologies recommended below apply to the three major classes of cultural resources expected in the project area—archaeological sites, standing structures, and shipwrecks.

Archaeological Sites

Two phases of work are necessary to identify and evaluate all archaeological sites in the project area. Phase I would consist of a complete bankline survey of the HNC itself. A subsequent systematic survey of those areas with a high probability for containing archaeological sites located in the dredge spoil sites to be employed by the proposed project would constitute phase II.

Bankline Survey of the HNC

As the entire HNC is to be dredged and thus impacted, a complete bankline survey of the canal is required. The canal was initially excavated between 1958 and 1962 and has been dredged several times since, all prior to any comprehensive archaeological investigations. The background research and the reconnaissance survey conducted as part of this study clearly show that the HNC cut through several archaeological sites, and that remnants of some of them survive, despite repeated dredging (see Figures 6-1 and 6-10). The canal is known to have impacted three previously recorded sites (16TR12, 16TR18, and 16TR72) and a minimum of seven unrecorded sites (HNC-1 through HNC-7). Some 23 additional shell deposits were noted in just the northern third of the canal during this study, suggesting that the number of unrecorded sites along the HNC is much higher (see Plates 1 to 5). Given the rapid widening of the HNC due to wave wake erosion over the last 40 years, sites not initially impacted by the canal's construction may be newly exposed.

The canal banks can be surveyed by two-to-four-person crews operating in small boats. Both banks of the canals should be carefully examined for cultural material. If the banks are obscured by vegetation small areas should be cleared or the bankline probed at 30 to 50 m intervals. The banklines can be surveyed from a slow-moving boat. When cultural material is identified, the boat should be docked and the bankline walked if possible.

Two systematic surface collection methods can then be employed at discovered sites, again depending on site condition and location. Many of the sites are expected to occur in a linear pattern along the canal or natural watercourse cut by the canal, producing an accumulation of lag "beach" material (primarily *rangia* and/or oyster shell in the case of prehistoric sites) along the bank. This beach material can be sectioned off into 10-to-30-m long collecting units, depending on the overall length of the beach deposit. The units will extend from the waters edge to at least the bankline and then continue on top of the bank where possible. All cultural material should then be collected by unit. The unit boundaries will also serve as a site grid.

For well-preserved, intact sites which are not oriented parallel to a specific bankline, a "ray" pattern of transects can be employed. In this system, the presumed central point of each site or midden

location is identified and a series of lines run out from that point at specific angles to the cardinal directions. Initial lines should be placed at 90°, 180°, 270°, and 360°. These could then be supplemented by additional lines at 45°, 135°, 225°, and 315°, if more detailed information on site size or configuration is required. Pedestrian survey and subsurface testing can be conducted along these transects.

In order to determine the size, depth, and condition of each site, subsurface testing will be required. On shell midden sites, a six to eight foot probe should be used at 20 to 30 m intervals along the transects of the site grid to determine the depth and extent of the shell deposit both above and below water. Shovel and/or auger tests should then be excavated at selected locations on the site grid to determine the type of landform the site occurs on, detect earth-midden deposits, and perhaps acquire diagnostic artifacts to augment the surface collections. Shovel tests may prove sufficient for sites not already buried by spoil, but augering will be needed at the deeply buried sites. For earth midden sites such as low midden "mounds" situated in the swamp or marsh, the auger should be used in lieu of the probe for site delineation.

When shovel tests are incorporated in the assessment procedures, all soil removed from each hole should be dry-screened through 1/4-in wire mesh where possible. Data from each auger or shovel test, including soil stratum, depth, soil type, soil color, soil texture, and inclusions (such as charcoal, sherds, lithics, faunal remains, etc.) should be collected.

Each site should be photographed from various angles to provide a record of its condition. A sketch map should also be produced for each site identified. The map should be to scale and show the locations of all subsurface tests and surface collection units. Important environmental, cultural, and physiographic features, such as canals, modern standing structures, vegetation, etc., should also be included on the map. Precise site positions should be obtained with differential GPS. The overall aim of all these assessment procedures would be to determine whether or not each site is eligible for inclusion in the National Register of Historic Places.

Systematic Survey of Dredge Spoil Sites

As the proposed project area includes numerous dredge spoil sites, in addition to the canal itself, a systematic survey of these areas is also necessary. Two recent and comprehensive studies con-

ducted in the project region both indicate that almost all, if not all, archaeological sites are located on once elevated landforms, regardless of site function (Robblee et al. 2000:99; Weinstein and Kelley 1992:379). Some of these landforms remain elevated today, while others have subsided. Other predictive models for site location in south Louisiana have produced the same results (Beavers 1982; Franks and Yakubik 1990; Gagliano et al. 1979; Speaker et al. 1986; Smith et al. 1986). Therefore, all elevated or once elevated landforms, particularly natural levees, in the project area are designated high probability areas for finding sites and require complete survey.

The utility of this approach in the project area is reflected in the results of the reconnaissance survey conducted as a part of this study. All seven new sites and 25 shell deposits identified occur in high probability areas along natural levees associated with bayous or crevasse channels cut by the HNC. Furthermore, in every high probability area examined in detail, a site or shell deposit was encountered. Those areas deemed high probability are shown on the project plans in Plates 1 to 5 and encompass 691.48 ac. These high probability areas are fairly numerous due to the number of natural channels cut by the HNC, and because the canal was originally positioned to follow the routes of preexisting waterways where possible. For instance, the upper end of the canal roughly follows the course of Bayou La Carpe from Houma down to Crozier, a distance of almost two miles.

First, all natural levee and abandoned beach landforms in the project area require identification. This includes those features exposed at the surface as well as those that Smith et al. (1986) identify as subsided and buried channels, the reason being that these buried channels have associated natural levees. The size of the natural levees associated with these subsided distributaries is currently unknown. However, for the purposes of this study it is assumed that levees associated with major distributary channels extend 300 m either side of the channel, while those of smaller distributaries extend 100 m either side of the channel. If the natural levees associated with these channels are obviously wider than the above measurements in some areas, the survey area should be expanded to encompass the entire landform. Those zones having a presumed low probability of containing archeological sites, including all areas identified as inland swamp, fresh marsh, brackish marsh, and salt marsh, do not require further investigations.

The survey should entail a pedestrian search of all high probability areas to locate midden areas, whether these are exposed shell lenses, organically stained earth-midden lenses, or low midden “mounds” situated in what are today swamp or marsh. Pedestrian survey should be conducted along transects spaced at 20-to-30-m intervals, generally perpendicular to the nearest bankline, natural or otherwise. Subsurface excavations, using a probe, shovel or auger, should be carried out at 20-to-30-m intervals along each transect. It is expected that earth-midden sites situated on elevated natural levees, and crossed during the terrestrial transect portion of the survey, would be examined principally through the use of shovel tests. Buried or subsided shell middens, on the other hand, would be assessed by probing and auger borings. The soil from all shovel tests should be screened through 1/4-inch wire mesh, if possible. If artifacts or other indications of human activities are encountered, then the site assessment procedures discussed above should be initiated.

In the event that unmarked burial sites or human skeletal remains area encountered during the course of these investigations or during construction, the provisions of the Louisiana Unmarked Human Burial Sites Preservation Act (Louisiana R.S. 8:671 and R.S. 36:209 (I) and 802.13) shall apply. This includes construction occurring anywhere on the permitted property, regardless of previously determined significance. Upon the discovery of such remains, all work which could further damage the unmarked burial, human skeletal remains or associated burial artifacts should immediately cease and the local law enforcement agency and the U.S. Army Corps of Engineers, New Orleans District, notified. If it is determined that the burial is not a crime scene, the State Historic Preservation Officer (SHPO) should be notified and a specific plan for the avoidance, mitigation, excavation, and/or reinterment of those remains developed through consultation with the State Archaeologist, who is Chairman of the Louisiana Unmarked Burial Sites Board. In the interim, every effort should be made to protect the remains from further disturbance. All human remains should be treated with dignity and respect.

Standing Structures

Data collected during the current study indicates that very few standing structures exist in the project area. Most of the project area was forested when the 1956 aerial photographs were shot (Amman International Corporation 1956). Any structures that

may have been standing at that time would have been obscured by the trees. The only community in any proximity to the canal is Cocodrie.

While high probability areas for archaeological sites do not always coincide with those for standing structures, in the restrictive delta plain environment they appear to. Therefore, a survey for standing structures can be conducted in tandem with the archaeological survey of the HNC bankline and high probability dredge spoil site areas. The only structures noted during the current study are: the Dulac pontoon bridge; a wooden shed and abandoned wooden dock on the east bank of the HNC just south of Bayou Guillaume; and three metal storage tanks in Existing Disposal Area Site E14 on either side of the old crevasse channel of Bayou Grand Caillou (see Plates 2 to 3). These, and any other structures identified in or adjacent to the project area, will need to be evaluated to determine if they are 50 years old or older. If they are of sufficient age, they will need to be recorded and their National Register eligibility determined.

Shipwrecks

As noted previously, the possibility for historic shipwreck sites in the HNC proper is considered relatively low, despite the fact that it crosses numerous natural channels. This is principally because these channels tend to be small and were never heavily traveled by watercraft. The main exceptions are Bayou Grand Caillou and Bayou Petit Caillou, both of which are crossed by the HNC and both of which have seen heavy use by watercraft throughout the historic period. Previous research has demonstrated that these, and other larger waterways in the region, contain numerous sunken and derelict vessels that have been purposefully abandoned or accidentally lost. On Bayou Grand Caillou itself, Flayhardt and Muller (1983) recorded 69 derelict boats, including luggers, trawlers, Lafitte skiffs, and tow boats, as well as modern recreational craft. Six of these vessels were identified as potentially eligible for inclusion in the National Register of Historic Places. In a reconnaissance survey of Bayou du Large, located just west of the HNC, Stout (1992) recorded the presence of 37 derelict vessels between Falgout Canal and Grand Pass. These included wooden luggers, Lafitte skiffs, and flatboats, as well as steel- and fiberglass-hulled boats. Stout, specifically, notes the historic importance of some of these vessels as “folk boats;” vernacular craft that are no longer being made in the area and whose remains as archaeological sites

may provide the best or “only surviving record of their existence” (Stout 1992:23). Thus, there is some possibility that abandoned or sunken vessels could exist where the HNC crosses Bayous Grand and Petit Caillou. The crossings of the lesser bayous, which might have been traveled by small craft such as pirogues or skiffs, may also have been the loci of the abandonment or sinking of these types of vessels.

The HNC itself is not yet 50 years old, and its excavation and repeated dredging presumably would have destroyed any wrecks within its path. However, there is always the possibility that wreck remains occur along the edges of the HNC either where dumped in the past via dredging or newly exposed as the HNC rapidly widens due to wave wake erosion. Such occurrences would be most likely where the HNC crosses natural channels that may have been used by vessels or been the site of their abandonment. It is even possible that some of the modern wrecks and navigation hazards on the HNC were snagged by the remains of older wrecks.

A ship 50 years old or older may also have wrecked in the canal since its opening. The wooden shrimp boat noted during this study may be an example of such an occurrence (see Figure 6-19). A third possibility is that older ships have sunk or been abandoned at old docking areas on the natural waterways cut by the HNC. For instance, underwater survey of old dock facilities on Bayou Schaffer in nearby St. Mary Parish revealed some 20 sunken vessels ranging in date from roughly 1880 to 1970 (Charles Pearson, personal communication 2003; Pearson and Saltus 1991). The abandoned wooden dock noted just south of Bayou Guilliame during these investigations may be such a location (see Plate 2).

The likelihood of shipwreck sites in the project area increases somewhat when the proposed dredge spoil sites are considered. Several of these sites encompass significant stretches of natural waterways, most of which have seen little or no boat traffic or alteration since superceded by the HNC in 1962. An unnamed drainage runs through dredge spoil Sites 1 and 13A and Bayou Provost through Sites 13B, 12A, and the access to Site 12 (see Plates 1 and 2). Although Bayou Provost appears to have been straightened, the presence of shell midden site 16TR89 along its southern bank between dredge spoil Sites 12 and 13 proves that portions of the bayou still follow their original course (see Plate 2). Bayou Guilliame runs through Sites 12A and 11A, a crevasse channel of

Bayou Grand Caillou through Sites E14 and 11, Coteau Charles/Mill Creek through Sites E15C and E15D, Mound Bayou through Site 16, and Wax Bayou through Site 19C (see Plates 2 to 4). Any of these small, natural channels may have been used by watercraft in the past, and might contain lost or abandoned vessels.

A remote-sensing survey of the HNC itself is not recommended, primarily because of the very low potential for historic vessel remains along most of the canal and the large amount of modern metal debris known to exist, particularly in the northern portion of the canal. Instead, informant interviews are recommended to determine what, if any, wrecks, docks or navigation hazards on the HNC might be 50 years old or older, including the two derelict vessels noted in the HNC during these investigations and the 11 sunken or abandoned craft considered navigation hazards by the U.S. Coast Guard (see Figures 6-19 and 6-20 and Table 6-4).

The informant interviews then need to be supplemented with visual reconnaissance of the canal, with particular attention paid to those areas where it crosses natural channels. At these locations, particular note should be made of docks, landings, etc., as well as any exposed or sunken vessels. This examination for non-terrestrial cultural resources can be conducted in tandem with the complete bankline survey of the HNC recommended previously for archaeological sites. For all vessels revealed by the informant interviews and/or bankline survey, background research, a remote sensing survey, and/or diving on targets could then be conducted, if necessary, to determine their age and NRHP eligibility.

Informant interviews and visual reconnaissance are also recommended to detect watercraft in bayous crossing the proposed disposal areas. These areas are all defined as having a high probability for containing archaeological sites, and therefore will be visually examined by boat during that part of the investigations. If wrecks are detected via informant interview or visual reconnaissance, they should be evaluated as described above.

Summary

In summary, a complete bankline survey of the HNC is recommended with the intention of identifying terrestrial and underwater archaeological sites and historic standing structures. A complete survey of all high probability areas in the proposed dredge

disposal sites is also necessary to identify the same sorts of cultural resources. No additional work is recommended in the low probability areas of the dredge disposal sites. The need to gather this kind of cultural resource data has grown more urgent due

to the rapid rate of land loss in the region over the last 50 years. Essentially, as sites are lost at an ever-increasing rate, it lessens, at a similarly increasing rate, our ability to ever address many of the research questions of interest noted above.

REFERENCES

Altschul, Jeffrey H.
1978 *Cultural Resources Impact Assessment: Houma-Terrebonne Regional Sewerage Plan.* Report No. 10. New World Research, Inc. Submitted to Region VI, U.S. Environmental Protection Agency, Dallas.

Amman International Corporation
1956 Aerial photography of Terrebonne Parish
245A. Amman International Corporation,
San Antonio, Texas.

Asch, David L., Kenneth B. Farnsworth, and Nancy B. Asch
1979 *Woodland Subsistence and Settlement, West Central Illinois.* Ms. on file, Foundation for Illinois Archaeology.

Annual Report of the Chief of Engineers (ARCE)
var. *Report of the Chief of Engineers.* House Executive Documents, Washington, D.C.
yrs.

Banks, Maj. Gen. Nathaniel P.
1863 *Department of the Gulf: Map 10. Military Approaches to New-Orleans.* Map on file, National Archives, Washington D.C.

Barton, Kimberly, Richard Greig and William Reeves
2003 *Land Use History for the Houma Navigation Canal Deepening Project, Terrebonne Parish, Louisiana.* Coastal Environments, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Bazet, R.A.
1934 Houma: An Historical Sketch. In *Centennial Celebration: Houma, Louisiana, May 10-13, 1934*, edited by R.A. Bazet, p. 9-43. King Hanaford, Morgan City, Louisiana.

Beavers, R.C.
1982 *Archaeological Site Inventory, Barataria Basin Marsh Unit—Core Area, Jean Lafitte National Historical Park, Jefferson Parish, Louisiana.* Report submitted to the National Park Service, Jean Lafitte National Historic Park.

Beavers, Richard C., Teresia R. Lamb, and John R. Greene
1984 *Archaeological Survey of the Upper Lafourche Delta, Lafourche, Terrebonne Parishes, Louisiana.* Research Report No. 8. Archaeological and Cultural Research Program, University of New Orleans.

Becnel, Thomas A.
1989 *The Barrow Family and the Barataria and Lafourche Canal, The Transportation*

Houma Navigation Canal Deepening Project

Revolution in Louisiana, 1829-1925. Louisiana State University Press, Baton Rouge and London.

Belmont, John S., and Stephen Williams
1981 Painted Pottery Horizons in the Southern Mississippi Valley. In *Traces of Prehistory: Papers in Honor of William G. Haag*, edited by Frederick H. West and Robert W. Neuman, pp. 19-42. Geoscience and Man No. 22. School of Geoscience, Louisiana State University, Baton Rouge.

Bergeron, Arthur W., Jr.
1985 The Lafourche Country in the Civil War. In *The Lafourche Country: The People and the Land*, edited by Philip D. Uzee, pp. 198-206. Center for Louisiana Studies, University of Southwestern Louisiana, Lafayette.

Binford, Lewis
1980 Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1):4-20.

Birchett Thomas, and Charles E. Pearson
1998 *Underwater Cultural Resources Survey of the Houma Navigation Canal, Cat Island Pass Channel Realignment, Terrebonne Parish, Louisiana.* Coastal Environments, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Booth, A.B.
1921 Louisiana Confederate Military Records. *Louisiana Historical Quarterly* 4(3):369-418.

Bouchereau, Alcée
1880 Statement of the Sugar and Rice Crops Made in Louisiana 1879-1880. Pelican Book and Job Printing Office, New Orleans.

1887 Statement of the Sugar and Rice Crops Made in Louisiana 1886-1887. L. Graham and Son, New Orleans.

Bouchereau, Louis
1869 Statement of the Sugar and Rice Crops Made in Louisiana 1868-1869. Young, Bright & Company, New Orleans.

1870 Statement of the Sugar and Rice Crops Made in Louisiana 1869-1870. Young, Bright & Company, New Orleans.

1871 Statement of the Sugar and Rice Crops Made in Louisiana 1870-1871. Bronze Pen Steam Book and Job Office, New Orleans.

1872 Statement of the Sugar and Rice Crops Made in Louisiana 1871-1872. Pelican Book and Job Printing Office, New Orleans.

1873 Statement of the Sugar and Rice Crops Made in Louisiana 1872-1873. Pelican Book and Job Printing Office, New Orleans.

1874 Statement of the Sugar and Rice Crops Made in Louisiana 1873-1874. Pelican Book and Job Printing Office, New Orleans.

1875 Statement of the Sugar and Rice Crops Made in Louisiana 1874-1875. Pelican Book and Job Printing Office, New Orleans.

Bouchereau, Louis
1876 Statement of the Sugar and Rice Crops Made in Louisiana 1875-1876. Pelican Book and Job Printing Office, New Orleans.

Bowman, Greg, and Janel Curry-Roper
1982 *The Houma People of Louisiana: A Story of Survival.* United Houma Nation, Inc., Houma, Louisiana.

Brain, Jeffrey P.
1969 *Winterville: A Case Study of Prehistoric Culture Contact in the Lower Mississippi Valley.* Ph.D. dissertation, Yale University. University Microfilms, Ann Arbor.

1978 Late Prehistoric Settlement Patterning in the Yazoo Basin and Natchez Bluffs Regions of the Lower Mississippi Valley. In *Mississippian Settlement Patterns*, edited by Bruce D. Smith, pp. 331-368. Academic Press, New York.

Braun, David P.
1977 *Middle Woodland—(Early) Late Woodland*

Social Change in the Prehistoric Central Midwestern U.S. Unpublished Ph.D. dissertation, Department of Anthropology, University of Michigan, Ann Arbor.

Brown, Clifford T., Lynn A. Berg, Julian Granberry, Christime Herman, Cinder Griffin Miller, Jeremy Pincoske, Roger Saucier, Susan Barrett Smith, Dave D. Davis, and R. Christopher Goodwin

1997 *Cultural Resource Literature and Records Review for Morganza to the Gulf Feasibility Study, Terrebonne and Lafourche Parishes, Louisiana.* R. Christopher Goodwin and Associates, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Brown, Clifford T., Lynn A. Berg, Julian Granberry, Christime Herman, Cinder Griffin Miller, Jeremy Pincoske, Roger Saucier, Susan Barrett Smith, Dave D. Davis, Patrick R. Robblee, and R. Christopher Goodwin

2000 *Morganza to the Gulf Feasibility Study: Cultural Resource Literature and Records Review, Terrebonne and Lafourche Parishes, Louisiana.* Volume I. R. Christopher Goodwin and Associates, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Brown, Ian W.

1982 *The Southeastern Check Stamped Pottery Tradition: A View from Louisiana.* Special Paper No. 4. Mid-Continental Journal of Archaeology, Kent, Ohio.

1984 Late Prehistory in Coastal Louisiana: The Coles Creek Period. In *Perspectives on Gulf Coast Prehistory*, edited by Dave D. Davis, pp. 94-124. Ripley P. Bullen Monographs in Anthropology and History No. 5. University Presses of Florida, Gainesville.

1985a *Natchez Indian Archaeology: Culture Change and Stability in the Lower Mississippi Valley.* Archaeological Report No. 15. Mississippi Department of Archives and History, Jackson.

1985b Plaquemine Architectural Patterns in the Natchez Bluffs and Surrounding Regions of the Lower Mississippi Valley. *Midcontinental Journal of Archaeology* 10(2):251-305.

Brown, Ian W., Richard S. Fuller, and Nancy Lambert-Brown

1979 *Site Survey in the Petite Anse Region, Southwest Coast, Louisiana.* Research Notes No. 11. Petite Anse Project, Lower Mississippi Survey, Peabody Museum, Harvard University, Cambridge.

Brown, Ian W., and Nancy Lambert-Brown

1978 *Archaeological Investigations at the Banana Bayou Mound (33-I-6).* Research Notes No. 5. Petite Anse Project, Lower Mississippi Survey, Peabody Museum, Harvard University, Cambridge.

Bureau of Marine Inspection and Navigation (BMIN)

1835 Enrollment document for the steamer *Merchant*, Port of Baltimore. Record Group 41, National Archives, Washington, D.C.

1836 Enrollment document for the steamer *Merchant*, Port of New Orleans. Record Group 41, National Archives, Washington, D.C.

1865 Enrollment document for the schooner *Thistle*, Port of Mobile. Record Group 41, National Archives, Washington, D.C.

1866 Enrollment document for the schooner *Thistle*, Port of Mobile. Record Group 41, National Archives, Washington, D.C.

1871 Enrollment document for the schooner *Thistle*, Port of Mobile. Record Group 41, National Archives, Washington, D.C.

1872 Enrollment document for the schooner *Thistle*, Port of Mobile. Record Group 41, National Archives, Washington, D.C.

1874 Enrollment document for the schooner *Thistle*, Port of Galveston. Record Group 41, National Archives, Washington, D.C.

1875 Registration document No. 21 and enrollment document No. 21 for the schooner *Thistle*, Port of Galveston. Record Group 41, National Archives, Washington, D.C.

1876 Enrollment document for the schooner *Thistle*, Port of Galveston. Record

Houma Navigation Canal Deepening Project

Group 41, National Archives, Washington, D.C.

1877 Enrollment document for the schooner *Thistle*, Port of New Orleans. Record Group 41, National Archives, Washington, D.C.

1882 Enrollment document for the schooner *Lizzie Haas*, Port of New Orleans. Record Group 41, National Archives, Washington, D.C.

1883 Enrollment document for the schooner *Lizzie Haas*, Port of New Orleans. Record Group 41, National Archives, Washington, D.C.

1892 Enrollment document for the schooner *Lizzie Haas*, Port of New Orleans. Record Group 41, National Archives, Washington, D.C.

1895 Enrollment document for the schooner *Lizzie Haas*, Port of New Orleans. Record Group 41, National Archives, Washington, D.C.

Bureau of Marine Inspection and Navigation (BMIN)

1899 Enrollment document for the schooner *Lizzie Haas*, Port of New Orleans. Record Group 41, National Archives, Washington, D.C.

Butler, J. Thomas, Jr.

1985 Bayou Lafourche Boats. In *The Lafourche Country: The People and the Land*, edited by P.D. Uzee, pp. 164-169. Center for Louisiana Studies, University of Southwestern Louisiana, Lafayette.

Byrd, Kathleen M.

1978 Zooarchaeological Analyses of Material from Certain Sites Along Bayous Chene, Shaffer, and the Lower Atchafalaya River. In *Archaeological Survey of the Lower Atchafalaya Region, South Central Louisiana*, by Jon L. Gibson, pp. 216-224. Report No. 5. Center for Archaeological Studies, University of Southwestern Louisiana, Lafayette.

Byrd, Kathleen M., and Robert W. Neuman

1978 Archaeological Data Relative to Prehistoric Subsistence in the Lower Mississippi River Alluvial Valley. In *Man and Environment in the Lower Mississippi Valley*, edited by Sam B. Hilliard, pp. 9-21. Geoscience and Man No. 14. School of Geoscience, Louisiana State University, Baton Rouge.

Caldwell, Joseph R., and R. L. Hall

1964 *Hopewellian Studies*. Scientific Paper No. 12. Illinois State Museum, Springfield.

Casey, Powell A.

1983 *Encyclopedia of Forts, Posts, Named Camps, and Other Military Installations in Louisiana, 1700-1981*. Claitor's, Baton Rouge.

Castille, George J. III

1983 *Cultural Resources Survey of Proposed Bridge Corridor, Gulf Intracoastal Waterway, Houma, Louisiana*. Prepared for Modjeski and Masters, Inc.

Castille, George J. III and Jody O. Holmes

1983 *Archaeological Testing of Selected Locations Within the Proposed Bridge Corridor, Gulf Intracoastal Waterway, Houma, Louisiana*. Prepared for Modjeski and Masters, Inc. and the Louisiana Department of Transportation and Development.

Castille, George J., Wayne P. Glander, Laura A. Landry, Kathleen G. McCloskey, and Charles E. Pearson

1979 *An Evaluation of Cultural Resources for the Proposed Relocation of U.S. 90 Between Bayou L'Ourse and LA 311, Terrebonne Parish, Louisiana*. Coastal Environments, Inc. Submitted to Office of Highways, Louisiana Department of Transportation and Development, Baton Rouge.

Castille, George J. and Charles E. Pearson

1980 *Cultural Resource Evaluation of the Donner Sawmill Site*. Coastal Environments, Inc. Submitted to Office of Highways, Louisiana Department of Transportation and Development, Baton Rouge.

Champomier, P.A.

1831 Statement of the Sugar Crop Made in Louisiana in 1831. Cook, Young and Company, New Orleans.

Champomier, P.A.

1845 Statement of the Sugar Crop Made in Louisiana in 1844. Cook, Young and Company, New Orleans.

1846 Statement of the Sugar Crop Made in Louisiana in 1845-6. Cook, Young and Company, New Orleans.

1849 Statement of Sugar Made in Louisiana in 1847-48. Cook, Young & Co., New Orleans.

1850 Statement of the Sugar Crop Made in Louisiana in 1849-50. Cook, Young and Company, New Orleans.

1851 Statement of the Sugar Crop Made in Louisiana in 1850-51. Cook, Young and Company, New Orleans.

1852 Statement of the Sugar Crop Made in Louisiana in 1851-52. Cook, Young and Company, New Orleans.

1853 Statement of the Sugar Crop Made in Louisiana in 1852-53. Cook, Young and Company, New Orleans.

1854 Statement of the Sugar Crop Made in Louisiana in 1853-54. Cook, Young & Co., New Orleans.

1855 Statement of the Sugar Crop Made in Louisiana in 1854-55. Cook, Young and Company, New Orleans.

1856 Statement of the Sugar Crop Made in Louisiana in 1855-56. Cook, Young and Company, New Orleans.

1857 Statement of the Sugar Crop of Louisiana of 1856-57. Cook, Young and Company, New Orleans.

1858 Statement of the Sugar of Louisiana of 1857-58. Cook, Young and Company, New Orleans.

1859 Statement of the Sugar Crop of Louisiana of 1858-59. Cook, Young and Company, New Orleans.

Chauvin, Phillip, Jr.

n.d. *Weekly Thibodaux Sentinel Microfilm Index 8/5/1865 Thru 12/7/1912 Deaths, Weddings, Births.* Terrebonne Genealogy Society, Houma, Louisiana.

Chomko, Stephen A., and Gary W. Crawford

1978 Plant Husbandry in Prehistoric East North America: New Evidence for its Development. *American Antiquity* 43(3):405-408.

Coastal Environments, Inc. (CEI)

1977 *Cultural Resources Evaluation of the Northern Gulf of Mexico Continental Shelf.* 3 vols. Cultural Resource Management Studies, Office of Archaeology and Historic Preservation, National Park Service, U.S. Department of the Interior, Washington, D.C.

Collins, Henry B.

1927 Archeological Work in Louisiana and Mississippi. In *Explorations and Fieldwork of the Smithsonian Institution in 1926*, pp. 200-207. Smithsonian Miscellaneous Collections No. 78(7). Smithsonian Institution, Washington, D.C.

1941 Relationships of an Early Indian Cranial Series from Louisiana. *Journal of the Washington Academy of Science* 31:145-155.

Comeaux, Malcolm L.

1972 *Atchafalaya Swamp Life: Settlement and Folk Occupations.* Geoscience and Man No. 2. School of Geoscience, Louisiana State University, Baton Rouge.

Confederate States of America (CSA)

1864 *Map of St. Mary Parish, Louisiana.* Map on file, Records of the Office of the Chief of Engineers, Record Group 77, Z-33, U.S. National Archives, Washington, D.C.

Darby, William

1816 *A Map of the State of Louisiana with Part of the Mississippi Territory.* Map on file, Office of the Chief of Engineers, Record Group 77, US-78, U.S. National Archives, Washington, D.C.

Houma Navigation Canal Deepening Project

Davis, Donald W.

1973 *Louisiana Canals and Their Influence on Wetland Development*. Ph.D. dissertation, Louisiana State University. University Microfilms, Ann Arbor.

Degelos, Pierre A.

1892 Statement of Sugar Made in Louisiana in 1828 and 1829. *The Louisiana Planter and Sugar Manufacturer* 9(4):65-68.

de La Harpe, Jean-Baptiste Benard

1971 *The Historical Journal of the Establishment of the French in Louisiana*. Translated by Joan Cain and Virginia Koenig, edited and annotated by Glenn R. Conrad. U.S.L. History Series No. 3. Center for Louisiana Studies, University of Southwestern Louisiana, Lafayette.

De Langara, Juan

1799 *Carta Esferica que Comprende las costas del Seno Mexicano, Construida de Order del Rey en el Deposito Hidrografico de Marina*. Map on file, Deposito Hidrografico de Marina, Madrid.

Dickins, Asbury, and John W. Forney (editors)

1860 *American State Papers. Documents, of the Congress of the United States, in Relation to the Public Lands, from the First Session of the Twentieth to the Second Session of the Twentieth Congress, Inclusive: Commencing December 3, 1827, and Ending March 3, 1829*, vol. 5. Gales and Seaton, Washington, D.C.

Fisk, Harold N.

1944 *Geological Investigation of the Alluvial Valley of the Lower Mississippi River*. Mississippi River Commission, U.S. Army Corps of Engineers, Vicksburg.

1952 *Geological Investigation of the Atchafalaya Basin and the Problem of Mississippi River Diversion*. 2 vols. Waterways Experiment Station, U.S. Army Corps of Engineers, Vicksburg.

Flayharty, R. A. and J. W. Muller

1983 *Cultural Resource Investigations: A Portion of Bayou Grand Caillou, Terrebonne Parish, Louisiana*. Planning Division,

New Orleans District, U.S. Army Corps of Engineers.

Floyd, William Barrow

1963 *The Barrow Family of Old Louisiana*. William B. Floyd, Lexington, Kentucky.

Floyd, Robert J. and Mark A. Stuckey

1984 *Archaeological, Engineering, and Hazard Study of Proposed 10-Inch Gas Pipeline Route from Proposed Anadarko Production Platform Block 2, South Pelto Area (OCS-G-4470) to Chevron "A" Platform Block 9 South Timbalier Area (S. L. 4238)*. Prepared for Texas Gas Transmission Corporation, Owensboro, Kentucky.

Ford, James A.

1935 *Ceramic Decoration Sequence at an Old Indian Village Site near Sicily Island, Louisiana*. Anthropological Study No. 1. Geological Survey, Louisiana Department of Conservation, New Orleans.

1936 *Analysis of Indian Village Site Collections from Louisiana and Mississippi*. Anthropological Study No. 2. Geological Survey, Louisiana Department of Conservation, New Orleans.

1951 *Greenhouse: A Troyville-Coles Creek Period Site in Avoyelles Parish, Louisiana*. Anthropological Paper No. 44(1). American Museum of Natural History, New York.

Ford, James A., Philip Phillips, and William G. Haag

1955 *The Jaketown Site in West-Central Mississippi*. Anthropological Paper No. 41(1). American Museum of Natural History, New York.

Ford, James A., and George I. Quimby, Jr.

1945 *The Tchefuncte Culture, an Early Occupation of the Lower Mississippi Valley*. Memoir No. 2. Society for American Archaeology, Menasha, Wisconsin.

Ford, James A., and Clarence H. Webb

1956 *Poverty Point: A Late Archaic Site in Louisiana*. Anthropological Paper No. 46(1). American Museum of Natural History, New York.

Ford, James A., and Gordon R. Willey
 1940 *Crooks Site, a Marksville Period Burial Mound in LaSalle Parish, Louisiana. Anthropological Study No. 3.* Geological Survey, Louisiana Department of Conservation, New Orleans.

Ford, Richard I.
 1974 Northeastern Archaeology: Past and Future Directions. *Annual Review of Anthropology* 3:385-413.

Foster, J. W.
 1873 *Pre-Historic Races of the United States of America.* S. C. Griggs and Company, Chicago.

Franks, Heschel A. and Jill-Karen Yakubik
 1990 *Archaeological Survey of 65 Acres of Land Adjacent to Bayou des Familles, Barataria Unit, Jean Lafitte National Historic Park and Preserve, Louisiana.* With Contributions by Marco J. Giardino. Southwest Cultural Resources Center Professional Papers Number 26, Branch of Cultural Resources Management, Division of Anthropology, National Park Service, Santa Fe, New Mexico.

Frazier, David E.
 1967 Recent Deltaic Deposits of the Mississippi River: Their Development and Chronology. *Transactions of the Gulf Coast Association of Geological Societies* 17:287-315.

Fritz, Gideon
 1832 Plat map of Township 18 S., Range 17 E., Southeastern District, Louisiana. Map on file, Louisiana State Land Office, Baton Rouge.

Gagliano, Sherwood M.
 1967 *Occupation Sequence at Avery Island.* Report No. 22. Coastal Studies Series, Louisiana State University, Baton Rouge.

1970 *Archaeological and Geological Studies at Avery Island, 1968-1970.* Coastal Studies Institute, Louisiana State University, Baton Rouge.

1984 Geoarchaeology of the Northern Gulf Shore. In *Perspectives on Gulf Coast Prehistory*, edited by Dave D. Davis, pp. 1-40. Ripley

P. Bullen Monographs in Anthropology and History No. 5. University Presses of Florida, Gainesville.

Gagliano, Sherwood M., Charles E. Pearson, Richard A. Weinstein, Diane E. Wiseman, and Christopher M. McClendon
 1982 *Sedimentary Studies of Prehistoric Archaeological Sites: Criteria for the Identification of Submerged Archaeological Sites of the Northern Gulf of Mexico Continental Shelf.* Coastal Environments, Inc. Submitted to Division of State Plans and Grants, National Park Service, U.S. Department of the Interior, Washington, D.C.

Gagliano, Sherwood M., Ben A. Small, and Robert J. Floyd
 1978 *Report on the Cultural Resources Evaluation for the Louisiana Offshore Oil Port Marine Facilities, Offshore Louisiana, Volume 2, Appendix A.* Coastal Environments, Inc. Submitted to Flour Ocean Services.

Gagliano, Sherwood M., and Clarence H. Webb
 1970 Archaic-Poverty Point Transition at the Pearl River Mouth. *Southeastern Archaeological Conference Bulletin* 12:47-72.

Gagliano, Sherwood M., Richard A. Weinstein, and Eileen K. Burden
 1975 *Archeological Investigations along the Gulf Intracoastal Waterway: Coastal Louisiana Area.* Coastal Environments, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Gagliano, Sherwood M., Richard A. Weinstein, Eileen K. Burden, Katherine L. Brooks, and Wayne P. Glander
 1979 *Cultural Resources Survey of the Barataria, Segnette, and Rigaud Waterways, Jefferson Parish, Louisiana.* 2 vols. Coastal Environments, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers. Copies available from Coastal Environments, Inc., Baton Rouge.

Gagliano, Sherwood M., and Johannes L. van Beek
 1975 An Approach to Multi-Use Management in the Mississippi Delta System. In *Models for Exploration*, edited by M. L. Broussard, pp. 223-228. Houston Geological Society, Houston.

Houma Navigation Canal Deepening Project

Gatschet, A. S.

1883 The Shetimasha Indians of St. Mary's Parish, Southern Louisiana. *Transactions of the Anthropological Society of Washington* 2:148-158.

Gertjansen, Doyle J.

1982 *Laboratory Simulation of Tchefuncte Period Ceramic Vessels from the Pontchartrain Basin*. Paper presented at the 8th annual meeting of the Louisiana Archaeological Society, Thibodaux.

Gertjansen, Doyle J., and J. Richard Shenkel

1983 Laboratory Simulation of Tchefuncte Period Ceramic Vessels from the Pontchartrain Basin. *Southeastern Archaeology* 2(1):37-63.

Giardino, Marco J.

1984 Documentary Evidence for the Location of Historic Indian Villages in the Mississippi Delta. In *Perspectives on Gulf Coast Prehistory*, edited by Dave D. Davis, pp. 232-257. Ripley P. Bullen Monographs in Anthropology and History No. 5. University Presses of Florida, Gainesville.

Gibson, Dennis (editor)

1979a The Journal of John Landreth. *Attakapas Gazette* 14(4):160-167.

1979b The Journal of John Landreth. *Attakapas Gazette* 14(3):103-109.

1980a The Journal of John Landreth. *Attakapas Gazette* 15(1):37-40.

1980b The Journal of John Landreth. *Attakapas Gazette* 15(2):69-78.

1980c The Journal of John Landreth. *Attakapas Gazette* 15(3):116-122.

Gibson, Jon L.

1974a The Rise and Decline of Poverty Point. *Louisiana Archaeology* 1:8-36.

1974b The Tchefuncte Culture in the Bayou Vermilion Basin, South Central Louisiana: A Developmental Case Study. *Bulletin of the Texas Archeological Society* 45:67-95.

1976 *Archaeological Survey of Bayou Teche, Vermilion River and Freshwater Bayou, South-Central Louisiana*. Report No. 2. Center for Archaeological Studies, University of Southwestern Louisiana, Lafayette.

1978a *Archaeological Examination of Shaffer Oak Ridge (16SMY50), St. Mary Parish, Louisiana: Evaluation of Impact*. Archaeology Inc. Submitted to Keystone General Contractors, Ltd., Morgan City.

1978b *Archaeological Survey of the Lower Atchafalaya Region, South Central Louisiana*. Report No. 5. Center for Archaeological Studies, University of Southwestern Louisiana, Lafayette.

1979 *Perceptions of Atchafalaya Drainage Basin Archaeology*. Archaeology, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

1980 *Documentary Evidence Bearing on Chitimacha Land Claims in the Bayou Plaquemine Tract, Iberville Parish, Louisiana*. Archaeology, Inc. Submitted to John C. Hose, Attorney at Law, New Orleans.

Gibson, Jon L.

1982 *Archeology and Ethnology on the Edges of the Atchafalaya Basin, South Central Louisiana: A Cultural Resources Survey of the Athafalaya Basin Protection Levees*. Center for Archaeological Studies, University of Southwestern Louisiana. Submitted to New Orleans District, U.S. Army Corps of Engineers. Copies available from New Orleans District, U.S. Army Corps of Engineers, New Orleans.

Gibson, Jon L., and Robert Gramling

1978 Analysis of Relative Site Locations. In *Archaeological Survey of the Lower Atchafalaya Region, South Central Louisiana*, by Jon L. Gibson, pp. 225-234. Report No. 5. Center for Archaeological Studies, University of Southwestern Louisiana, Lafayette.

Gibson, Jon L., Robert Gramling, Steven Brazda, and Steve Lark
 1978 The Lower Atchafalaya Subsistence System. In *Archaeological Survey of the Lower Atchafalaya Region, South Central Louisiana*, by Jon L. Gibson, pp. 235-260. Report No. 5. Center for Archaeological Studies, University of Southwestern Louisiana, Lafayette.

Gibson, Jon L. and J. Richard Shenkel
 1989 Louisiana Earthworks: Middle Woodland and Predecessors. In *Middle Woodland Settlement and Ceremonialism in the Midsouth and Lower Mississippi Valley*, edited by Robert C. Mainfort, Jr., pp. 7-18. Mississippi Department of Archives and History, Jackson.

Gibson, Jon L., and Michael E. Stout
 n.d. Request for Determination of Eligibility for Avoca Island Pumping Plant Number 1 (16SMY52). National Register of Historic Places Determination of Eligibility Form, on file, New Orleans District, U.S. Army Corps of Engineers.

Glass, J.S. (Publisher)
 1901 The Southern Manufacturer. Volume V. New Orleans.

Goodwin, R. Christopher, Jill-Karen Yakubik, Gallo-way W. Selby, Kenneth R. Jones, Debra Stayner, and Janice Cooper
 1985a *Cultural Resources Survey of the Morgan City and Vicinity Hurricane Protection Project*. R. Christopher Goodwin and Associates, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Goodwin, R. Christopher, Jill-Karen Yakubik, Gallo-way W. Selby, and Kenneth R. Jones
 1985b *An Archeological and Historic Sites Inventory of Bayou Teche between Franklin and Jeanerette, Louisiana*. R. Christopher Goodwin and Associates, Inc. Submitted to Division of Archaeology, Louisiana Department of Culture Recreation and Tourism, Baton Rouge.

Gould, E.W.
 1951 *Fifty Years on the Mississippi, or Gould's History of River Navigation*. Reprint of the 1899 edition. Long's College Book Co., Columbus, Ohio.

Griffin, James. B.
 1967 Eastern North American Archaeology: A Summary. *Science* 156(3772):175-191.

Guidry, Sherwin
 1985 *Le Terrebonne: A History of Montegut*. Privately Published.

Gulf South Research Institute (GSRI)
 1975 *Environmental Assessment of Proposed Pipeline Construction in Terrebonne, Lafourche, Jefferson and Plaquemines Parishes*. Gulf South Research Institute. Submitted to Louisiana Interstate Gas Corporation, Alexandria, Louisiana.

Haag, William
 1985 *Archaeological Survey of Three Proposed Forced Drainage Projects 4-4; 4-3B; 4-3C; Parish Project No. 83-g-25, Terrebonne Parish, Louisiana*. Report on file at the Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

Hackett, Charles Wilson (editor)
 1931 *Pichardo's Treatise on the Limits of Louisiana and Texas: An Argumentative Historical Treatise with Reference to the Verification of the True Limits of the Provinces of Louisiana and Texas; Written by Father Jose Antonio Pichardo, of the Congregation of the Oratory of San Felipe Neri, to Disprove the Claim of the United States that Texas was Included in the Louisiana Purchase of 1803*, vol. 1. University of Texas Press, Austin.

Hahn, Thurston H.G., III and Cherie A. Schwab
 1998 *Donner, Louisiana: Historical and Archaeological Investigations of an Early Twentieth Century Sawmill Community*. Coastal Environments, Inc. Submitted to Office of Highways, Louisiana Department of Transportation and Development, Baton Rouge.

Harris, Frederic R., Inc.
 1937 *Report on the Proposed Houma Ship Canal*. Frederic R. Harris, Inc., New York.

Houma Navigation Canal Deepening Project

John H. Bernhard, Consulting Engineers, New Orleans. Prepared for the Houma Harbor and Terminal District, Board of Commissioners, Houma, Louisiana.

Hebert, Donald J.

1978 *South Louisiana Records. Church and Civil Records of Lafourche-Terrebonne Parishes Volume 1 (1794-1840)*. Hebert Publications, Rayne, Louisiana.

Heartfield, Price and Greene, Inc.

1989 *A Cultural Resources Survey of Above-Ground Portions of a Proposed Pipeline Right-of-Way in Section 58, T20S, R18E, Terrebonne Parish, Louisiana*. Heartfield, Price and Greene, Inc., Monroe, Louisiana. Prepared for Tenneco Gas, Houston, Texas.

Holley, George R., and Gary B. DeMarçay

1977 *Preliminary Report on the Prehistory of Barataria*. Paper presented at the 3rd annual meeting of the Louisiana Archaeological Society, New Orleans.

Homberg, Jeffery A.

1992 Archaeological Investigations at the LSU Campus Mounds. *Louisiana Archaeology* 15:31-204.

Houma Daily Courier

1971 Article on steamboat transport on Bayou Terrebonne. *Houma Daily Courier*. Sept. 26, 1971. Houma, Louisiana.

Houma Harbor and Terminal District, Board of Commissioners

1939 *Building the Houma Navigation Canal*. February 7, 1939. Flyer in Vertical File, Terrebonne Parish Library, Houma.

Hughes, G.W.

1842 *Map of a Military Reconnaissance and Survey of the approaches to New Orleans from the Gulf of Mexico Made under the direction of Capt. G.W. Hughes, U.S. Topl. Engrs. By Capt. G.W. Hughes, U.S. Topl. Engrs., 1st Lt. L. Sitgreaves, W.H. Warner, 2nd Lt. R.M. McLane, R.P. Baker, and J.J. Williams*. Map on file, Coastal Environments, Inc., Baton Rouge.

Hunter, Donald G., Charles E. Pearson, and Sally K. Reeves

1988 *An Archaeological Survey of Golden Ranch Plantation, Lafourche Parish, Louisiana*. Coastal Environments, Inc., Baton Rouge. Submitted to Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

Hutchins, Thomas

1968 *An Historical Narrative and Topographical Description of Louisiana, and West-Florida*. Reprinted. University of Florida Press, Gainesville. Originally published 1784, Thomas Hutchins, Philadelphia.

Jackson, Homer Edwin

1986 *Sedentism and Hunter-Gatherer Adaptations in the Lower Mississippi Valley: Subsistence Strategies during the Poverty Point Period*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Michigan, Ann Arbor.

Jeter, Marvin D., Jerome C. Rose, G. Ishmael Williams, Jr., and Anna M. Harmon

1989 *Archaeology and Bioarchaeology of the Lower Mississippi Valley and Trans-Mississippi South in Arkansas and Louisiana*. Research Series No. 37. Arkansas Archaeological Survey, Fayetteville.

Jochim, Michael

1976 *Hunter-Gatherer Subsistence and Settlement: A Predictive Model*. Academic Press, New York.

Kelley, David B.

1988 *Archeological and Historical Research on Avoca Plantation: Testing of Site 16 SMY 130 and Survey of Proposed Borrow Areas for EABPL Item E-96, St. Mary Parish, Louisiana*. Cultural Resources Series Report No. COELMN-PD-88/01. New Orleans District, U.S. Army Corps of Engineers.

Kestenbaum, Lawrence

2003 *The Political Graveyard, Index to Politicians: Quinnell to Quynn*. <<http://politicalgraveyard.com/bio/quinney-quitman.html>>

Kidder, Tristram R., Gayle Fritz, Kenneth R. Jones, Patrick Jones, Richard Kesel, Benjamin Maygarden, Todd McMakin, Lawrence Santeford, Roger T. Saucier, Rhonda L. Smith, Douglas Wells, and James Whelan

1995 *Archaeological Data Recovery at 16JE218, Jefferson Parish, Louisiana.* Earth Search, Inc., New Orleans. Submitted to the U.S. Army Corps of Engineers, New Orleans District.

Kniffen, Fred B.

1936 Preliminary Report on the Indian Mounds and Middens of Plaquemines and St. Bernard Parishes. In *Lower Mississippi River Delta: Reports on the Geology of Plaquemines and St. Bernard Parishes*, by Richard J. Russell, H. V. Howe, J. H. McGuirt, C. F. Dohm, W. Hadley, Jr., F. B. Kniffen, and C. A. Brown, pp. 407-422. Geological Bulletin No. 8. Geological Survey, Louisiana Department of Conservation, New Orleans.

Kniffen, Fred B.

1938 The Indian Mounds of Iberville Parish. In *Reports on the Geology of Iberville and Ascension Parishes*, by Henry V. Howe, Richard J. Russell, Fred B. Kniffen, James H. McGuirt, and Stanley M. McDonald, pp. 189-207. Geological Bulletin No. 13. Geological Survey, Louisiana Department of Conservation, New Orleans.

Knipmeyer, W. B.

1956 *Settlement Succession in Eastern French Louisiana.* Ph.D. dissertation, Louisiana State University. University Microfilms, Ann Arbor.

Kovel, Ralph, and Terry Kovel

1986 *Kovel's New Dictionary of Marks: Pottery & Porcelain 1850 to the Present.* Crown Publishers, New York.

La Tourette, John

1846 *Reference Map of the State of Louisiana from the Original Surveys of the United States Which show the Spanish Grants, Townships, Sections, or mile squares, Settlement Rights &c. also the Plantations with the owners' names Engraved thereon.* Map on file, Office of the Chief of Engineers, Record Group 77, M-72,

U.S. National Archives, Washington, D.C.

Lewis Thomas M. N., and Madeline Kneberg Lewis
1961 *Eva: An Archaic site.* A University of Tennessee Study in Anthropology, University of Tennessee Press, Knoxville.

Lockport Rotary Club

1994 *Waterways Edition. A Sketch of the Louisiana Inter-Coastal Canal Route from Morgan City to New Orleans via Houma and Lockport. 1910. A Reproduction.* Janlo Services, Lockport, Louisiana.

Louisiana State Department of Public Works
1957 *Map of Proposed Houma Navigation Canal, Terrebonne Parish.* December. Manuscript on file at the Terrebonne Port Commission, Houma, Louisiana.

Lowrie, Walter (editor)

1834 *American State Papers. Documents, Legislative and Executive, of the Congress of the United States, in Relation to the Public Lands, from the First Session of the First Congress to the First Session of the Twenty-Third Congress: March 4, 1789, to June 15, 1834*, vol. 2. U.S. Congress, Washington, D.C.

Lowrie, Walter and Walter S. Franklin (editors)
1834 *American State Papers. Documents, Legislative and Executive, of the Congress of the United States, in Relation to the Public Lands, from the First Session of the Fourteenth to the First Session of the Eighteenth Congress, Inclusive: Commencing December 4, 1815, and Ending May 27, 1824*, vol. 3. Gales and Seaton, Washington, D.C.

Lytle, William M.
1975 *Merchant Steam Vessels of the United States, 1807-1868.* Publication No. 6, Steamship Historical Society of America, Mystic, Connecticut.

Manuel, Joe
1979 A Radiocarbon Date from the Hornsby Site—16SH21. *Newsletter of the Louisiana Archaeological Society* 6(1):18-19.

1981 A Key to the Lithic Material of 16SH21—

Houma Navigation Canal Deepening Project

The Hornsby Site. *Newsletter of the Louisiana Archaeological Society* 8(1):9-22.

McCulloh, William J.

1855 Plat map of Township 17 S., Range 17 E., Southeastern District, Louisiana. Map on file, Louisiana State Land Office, Baton Rouge.

1856a Plat map of Township 19 S., Range 17 E., Southeastern District, Louisiana. Map on file, Louisiana State Land Office, Baton Rouge.

1856b Plat map of Township 20 S., Range 17 E., Southeastern District, Louisiana. Map on file, Louisiana State Land Office, Baton Rouge.

McIntire, William G.

1958 *Prehistoric Indian Settlement of the Changing Mississippi River Delta*. Coastal Studies Series No. 1. Louisiana State University, Baton Rouge.

McIntire, William G., and Robert H. Baumann

1984 *Cultural Resources Survey of a Proposed Weir Near Marmande Ridge and Minors Canal, Terrebonne Parish, Louisiana*. Submitted to Tenneco Oil Company, Houma, Louisiana.

1985 *Cultural Resources Survey of Proposed Water Control Structures near Lake Carrion Crow, Terrebonne Parish, Louisiana*. Submitted to Tenneco Oil Company, Houma, Louisiana.

1987a *Cultural Resource Investigations of Proposed Sewerage Lines and Related Facilities in the Vicinity of Houma, Louisiana*. Report on file at the Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

1987b *Cultural Resource Investigations of Bayou Petit Caillou, Bush Canal, and Bayou Terrebonne in the Vicinity of Chauvin*. Report on file at the Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

1987c *Cultural Resource Investigations of the East Bank of Bayou Grand Caillou, Loui-*

siana, from Hog Bayou to Bayou Dulac

Terrebonne Parish, Louisiana. Report on file at the Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

McWilliams, Richebourg Gaillard
(translator and editor)

1953 *Fleur de Lys and Calumet: Being the Penicaut Narrative of French Adventure in Louisiana*. Louisiana State University Press, Baton Rouge.

1981 *Iberville's Gulf Journals*. University of Alabama Press, University, Alabama.

Milanich, Jerald T., and Charles H. Fairbanks

1980 *Florida Archaeology*. Academic Press, New York.

Miller, Cinder Griffin, David S. Robinson, Roger T. Saucier, Susan Barrett Smith, John L. Seidel, Glenn Walter, Clifford T. Brown, Michele Williams, and William P. Athens

1996 *Phase I Cultural Resources Survey and Inventory of the Proposed Discovery Gas Transmission LLC Pipeline Project, Gulf of Mexico to Lafourche Parish, Louisiana*. R. Christopher Goodwin & Associates, Inc. Submitted to Discovery Gas Transmission LLC, New Orleans.

Miller, Cinder Griffin, R. Christopher Goodwin, Glenn Walter, T.R. Kidder, Marie Danforth, Roger T. Saucier, John Jones, William Hayden, Allen Green, Angele Montana, Nathanael Heller, Charlene Keck, Michele Williams, and Dave D. Davis

2000 *Phase III Data Recovery Excavations at Site 16LF66, the Discovery Site, a Site Identified within the Discovery Producer Services, L.L.C., Larose Gas Processing Plant in Lafourche Parish, Louisiana*. R. Christopher Goodwin & Associates, Inc. Submitted to Discovery Gas Transmission LLC, New Orleans.

Mires, Peter B.

1986 *The Correspondence of Cadastral Survey and Natural Vegetation and the Study of the Historic Settlement of Terrebonne Parish, Louisiana*. Ms. on file, Coastal Environments, Inc., Baton Rouge.

Neitzel, Robert S.

1978 *Archaeological Survey for Louisiana Intrastate Gas Corporation*. Report on file at the Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

Neuman, Robert W.

1973 *Archaeological Survey of the Bayou Lafourche and Lafourche-Jump Waterway, Louisiana*. Report on file at the Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

1974 *Archaeological Survey of the Houma Navigation Canal and Bayous LaCarpe, Terrebonne, Petit Caillou, and Grand Caillou, Terrebonne Parish, Louisiana*. Report on file at the Division of Archaeology, Louisiana Department of Culture, Recreation and Tourism, Baton Rouge.

1977 *An Archeological Assessment of Coastal Louisiana*. Melanges No. 11. Museum of Geoscience, Louisiana State University, Baton Rouge.

1984 *An Introduction to Louisiana Archaeology*. Louisiana State University Press, Baton Rouge.

1992 *A Perforated, Spatulate Stone Celt from Louisiana*. Paper presented at the 18th annual meeting of the Louisiana Archaeological Society, Baton Rouge.

Neuman, Robert W., and S. Frank Servello

1976 *Atchafalaya Basin Archaeological Survey*. Department of Geography and Anthropology, Louisiana State University. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Newcomb, F. D.

1842 Plat map of Township 16 S., Range 13 E., Southeastern District, Louisiana. Map on file, Louisiana State Land Office, Baton Rouge.

Newton, Milton B., Jr. (editor)

1985 *The Journal of John Landreth, Surveyor: An Expedition to the Gulf Coast, November 15, 1818-May 19, 1819*. Geoscience Publications, Louisiana State University, Baton Rouge.

Odom, T.D.

1931 *Bayous Grand Caillou, Pelton, Le Carpe and Caillouet Canal. La. In one Sheet*. U.S. Engineer Office, New Orleans.

Odom, Van D.

1943 The Political Career of Thomas Overton Moore, Secession Governor of Louisiana. *Louisiana Historical Quarterly* 26(4):975-1054.

Official Records of the War of the Rebellion (ORE)

1883 Official Records of the Union and Confederate Armies in the War of the Rebellion, Series I, Part 1, Vol. 41. U.S. Government Printing Office, Washington, D.C.

Pearson, Charles E.

1986 Dating the Course of the Lower Red River in Louisiana: The Archaeological Evidence. *International Journal of Geoarchaeology* 1(1):39-43.

1993 The Louisiana State War Schooner *Antonia*: An Historical Foundling. *Louisiana History* 34:461-475.

Pearson, Charles E., George J. Castille, Donald Davis, Thomas E. Redard and Allen R. Saltus, Jr.

1989 *A History of Waterborne Commerce and Transportation within the U. S. Army Corps of Engineers New Orleans District and an Inventory of Known Underwater Cultural Resources*. Coastal Environments, Inc., Baton Rouge. Submitted to the U.S. Army Corps of Engineers, New Orleans District.

Pearson, Charles E. and Donald W. Davis

1995 Cultural Adaptation to Landforms in the Mississippi River Delta Plain. *Geological Society of America Field Trip Guide Book* 10:239-267. New Orleans.

Pearson, Charles E., Bryan L. Guevin and Allen R. Saltus, Jr.

1991 *Remote-Sensing Survey of the Lower Pearl and West Pearl Rivers, Louisiana and Mississippi*. Coastal Environments, Inc., Baton Rouge. Submitted to the U.S. Army Corps of Engineers, Vicksburg District.

Houma Navigation Canal Deepening Project

Pearson, Charles E. and Allen R. Saltus, Jr.

1991 *Remote Sensing Survey of the Atchafalaya Basin Main Channel, Atchafalaya Channel Training Project, Sts. Martin and Mary Parishes, Louisiana.* Coastal Environments, Inc., Baton Rouge. Submitted to the U.S. Army Corps of Engineers, New Orleans District.

Pharr, John Andrus

n.d. Diary of John Andrus Pharr. Ms. on file, Morgan City Archives, Morgan City, Louisiana.

Phillips, Philip

1958 Application of Wheat-Gifford-Wasley Taxonomy to Eastern Ceramics. *American Antiquity* 24(2):117-125.

1970 *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955.* 2 vols. Paper No. 60. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Phillips, Philip, and Gordon R. Willey

1953 Method and Theory in American Archeology: An Operational Basis for Culture-Historical Integration. *American Anthropologist* 55(5):615-633.

Piatek, Bruce John

1994 The Tomoka Mound Complex in Northeast Florida. *Southeastern Archaeology* 13(2):109-118.

Pierce, G. W.

1851 Historical and Statistical Collections of Louisiana. *De Bow's Review* 11:601-611.

Poplin, Eric C., Kenneth C. Kelly, Donald Bascle, and R. Christopher Goodwin

1986 *Cultural Resources Survey of the Western Sections of the Larose to Golden Meadow Hurricane Protection Project. Lafourche Parish, Louisiana.* R. Christopher Goodwin & Associates, Inc. Prepared for the U.S. Army Corps of Engineers, New Orleans District.

Poussin, Captain

1817 *Reconnoitering Chart of the South Frontier of the United States of America from the River Perdido towards the East as far*

as the River Sabine to the West. Map on file, Office of the Chief of Engineers, Record Group 77, US-24, U.S. National Archives, Washington, D.C.

Prichard, Walter, Fred B. Kniffen, and Clair A. Brown (editors)

1945 Southern Louisiana and Southern Alabama in 1819: The Journal of James Leander Cathcart. *Louisiana Historical Quarterly* 23(3):735-921.

Quimby, George I., Jr.

1951 *The Medora Site, West Baton Rouge Parish, Louisiana.* Anthropological Series No. 24(2). Field Museum of Natural History, Chicago.

1957 *The Bayou Goula Site, Iberville Parish, Louisiana.* Fieldiana No. 47(2). Chicago Natural History Museum, Chicago.

Rappaport, Roy A.

1968 *Pigs for the Ancestors.* Yale University Press, New Haven.

Rehder, John B.

1971 *Sugar Plantation Settlements of Southern Louisiana: A Cultural Geography.* Ph.D. dissertation, Louisiana State University. University Microfilms, Ann Arbor.

Righton, A.F.

1831 Plat map of Township 18 S., Range 17 E., Southeastern District, Louisiana. Map on file, Louisiana State Land Office, Baton Rouge.

Rivet, Philip G.

1977 Cultural Resources Survey of the Proposed Replacement of the LA 55 Bridge Over Humble Canal. Untitled letter report on file at the Louisiana Department of Culture, Recreation, and Tourism, Office of Cultural Development, Division of Archaeology, Baton Rouge.

1979 *State Project No. 244-01-15, Federal-Aid Project No. BRS-350-1(002), Schriever-Gibson (Bridges), Route La 20, Terrebonne Parish.* Memorandum on file, Office of Highways, Louisiana Department of Transportation and Development, Baton Rouge.

Robblee, Patrick R., Matthew J. Keelean, Colleen Hanratty, Jeremy Pincoske, and William P. Athens
 2000 *Morganza to the Gulf Feasibility Study: Cultural Resource Literature and Records Review, Terrebonne and Lafourche Parishes, Louisiana*. Volume II. R. Christopher Goodwin and Associates, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Robinson, David S. and John L. Seidel
 1995 *Documentation of Several Historic Vernacular Watercraft on Bayou DuLarge, Terrebonne Parish, Louisiana*. Prepared for the U.S. Army Corps of Engineers, New Orleans District.

Rogers, D. P.
 1976 *Charisma in Old Louisiana*. Privately published, Thibodaux, Louisiana.

Rolingson, Martha Ann (editor)
 1982 *Emerging Patterns of Plum Bayou Culture: Preliminary Investigations of the Toltec Mounds Research Project*. Research Series No. 18. Arkansas Archeological Survey, Fayetteville.

Roy, Edison Peter
 1959 *The Indians of Dulac: A Descriptive Study of a Racial Hybrid Community in Terrebonne Parish, Louisiana*. Unpublished Master's thesis, Department of History, Louisiana State University, Baton Rouge.

Russ, David P.
 1975 *The Quaternary Geomorphology of the Lower Red River Valley, Louisiana*. Ph.D. dissertation, Pennsylvania State University. University Microfilms, Ann Arbor.

Russell, Richard J.
 1940 Quaternary History of Louisiana. *Bulletin of the Geological Society of America* 51:1199-1234.

Russo, Michael
 1994 A Brief Introduction to the Study of Archaic Mounds in the Southeast. *Southeastern Archaeology* 13(2):89-93.

Saucier, Roger T.
 1974 *Quaternary Geology of the Lower Mississipi Valley*. Research Series No. 6. Arkansas Archeological Survey, Fayetteville.

1981 Current Thinking on Riverine Processes and Geologic History as Related to Human Settlement in the Southeast. In *Traces of Prehistory: Papers in Honor of William G. Haag*, edited by Frederick H. West and Robert W. Neuman, pp. 7-18. Geoscience and Man No. 22. School of Geoscience, Louisiana State University, Baton Rouge.

Saunders, Rebecca
 1994 *Annual Report for Management Units 4 and 5*. Regional Archaeology Program, Museum of Natural Science, Louisiana State University, Baton Rouge.

Saunders, Joe W., Thurman Allen and Roger T. Saucier
 1994 Four Archaic? Mound Complexes in Northeast Louisiana. *Southeastern Archaeology* 13(2):134-153.

Shea, Andrea B.
 1978 Botanical Remains. In *The Peripheries of Poverty Point*, edited by Prentice M. Thomas and L. Janice Campbell, pp. 245-260. Report of Investigations No. 12. New World Research, Inc., Pollack, Louisiana.

Shenkel, J. Richard
 1974 Big Oak and Little Oak Islands, Excavations and Interpretations. *Louisiana Archaeology* 1:37-65.

Smith, Bruce D.
 1989 Origins of Agriculture in Eastern North America. *Science* 246:1566-1571.

Smith, Lawson M., Joseph B. Dunbar, and Louis D. Britsch
 1986 *Geomorphological Investigation of the Atchafalaya Basin, Area West, Atchafalaya Delta, and Terrebonne Marsh*. Technical Report No. GL-86-3. Waterways Experiment Station, U.S. Army Corps of Engineers, Vicksburg.

Speaker, John Stuart, Joanna Chase, Carol Poplin, Herschel Franks, and R. Christopher Goodwin
 1986 *Archeological Assessment of the Barataria Unit, Jean Lafitte National Historical Park*. Submitted by R. Christopher Goodwin &

Houma Navigation Canal Deepening Project

Associates, Inc., to the National Park Service, Southwest Region, Santa Fe, New Mexico.

Stahls, Paul R., Jr.
1976 *Plantation Homes of the Lafourche Country*. Pelican Publishers, Gretna, Louisiana.

Stanton, Max
1971 *The Indians in the Grand Caillou-Dulac Community*. Unpublished Master's thesis, Department of History, Louisiana State University, Baton Rouge.

State of Maryland, Department of Natural Resources
2003 <http://www.dnr.state.md.us/fisheries/recreational/articles/oyster_history.html#History%20of%20Oyster%20Population%20Surveys%20in%20Maryland>

Steponaitis, Vincas P.
1974 *Late Prehistory of the Natchez Region: Emerald and Foster Sites*. Unpublished Honors thesis, Department of Anthropology, Harvard University, Cambridge.

Stoltman, James B.
1978 Temporal Models in Prehistory: An Example from Eastern North America. *Current Anthropology* 19(4):703-746.

Stout, Michael E.
1992 *A Reconnaissance Survey of Derelict Boats on Bayou DuLarge, Terrebonne Parish, Louisiana*. Planning Division, New Orleans District, U.S. Army Corps of Engineers. Cultural Resources Series, Report No. COELMN/PD-92/04.

Struever, Stuart, and Kent Vickery
1973 The Beginning of Cultivation in the Midwest-Riverine Area of the United States. *American Anthropologist* 75:1197-1221.

Styles, Bonnie Whatley
1981 *Faunal Exploitation and Resource Selection: Early and Late Woodland Subsistence in the Lower Illinois Valley*. Archeological Program, Northwestern University, Evanston, Illinois.

Sultzman, Lee
2000 First Nations: Houma History. Part of a Web history of 240 tribes. <<http://www.diskshovel.com/hou.html>>

Swanton, John R.
1911 *Indian Tribes of the Lower Mississippi Valley and Adjacent Coast of the Gulf of Mexico*. Bulletin No. 43. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Tanner, H.S.
1827 *Louisiana and Mississippi by H.S. Tanner. Improved to 1827*. Ms. on file, Record Group 49, U.S. National Archives, Washington, D.C.

Terrebonne Parish Assessor's Office
ca. Map of Township and Sections in Terrebonne Parish. Terrebonne Parish Assessor's Office, Houma, Louisiana.

Terrebonne Parish Conveyance Records
var. Office of the Clerk of Court, Houma, Terrebonne Parish, Louisiana.

Terrebonne Parish Directory
1897 Terrebonne Parish Directory 1897. Unknown Publishers, Houma.

Terrebonne's 150th
1972 *The Story of Terrebonne: 1822-1972*. Ms. in Vertical File, Terrebonne Parish Library, Houma.

Tornqvist, T.E., T.R. Kidder, W.J. Autin, K. van der Borg, A.F.M. de Jong, C.J.W. Klerks, E.M.A. Snijders, J.E.A. Storms, R.L. van Dam and M.C. Wiemann
1996 A Revised Chronology of Mississippi River Subdeltas. *Science* 271:1693-1696.

Toth, Edwin Alan
1977 *Early Marksville Phases in the Lower Mississippi Valley: A Study of Culture Contact Dynamics*. Unpublished Ph.D. dissertation, Department of Anthropology, Harvard University, Cambridge.

1988 *Early Marksville Phases in the Lower Mississippi Valley: A Study of Culture Contact Dynamics*. Archaeological Report No. 21. Mississippi Department of Archives and History, Jackson.

Toulouse, J. H.
1972 *Bottle Makers and their Marks*. 2nd ed. Thomas Nelson, New York.

Trammell, Camilla D.
1986 *Seven Pines: Its Occupants and their Letters, 1825-1872.* Camilla D. Trammell, Houston.

Tregle, Joseph George, Jr.
1942 Louisiana and the Tariff, 1816-1846. *Louisiana Historical Quarterly* 25(1):24-148.

U. S. Congress
1931 Congressional Documents, 72nd Congress, 1st and 2nd Sessions, 1931-1933: Rivers and Harbors, Volume 4. Doc. 206.

1962 Congressional Documents, House of Representatives, 87th Congress, 2nd Session, The River and Harbor Act of 23 October 1962, Doc. No. 583.

United States Population Census: Louisiana, Terrebonne Parish (USPCTP)
1880 Manuscript of Terrebonne Parish, Louisiana. Microfilm on file, Bluebonnet Branch, East Baton Rouge Parish Public Library, Baton Rouge.

U.S. Army Engineer District
1975 *Composite Environmental Statement for Operation and Maintenance Dredging of Four Projects located South of the Gulf Intracoastal Waterway in Terrebonne Parish, Louisiana: Houma Navigation Canal, Louisiana; Little Caillou Bayou, Louisiana; Bayous Grand Caillou and Le Carpe (waterway from the Gulf Intracoastal Waterway to Bayou Dulac), Louisiana; Bayou Terrebonne, Louisiana.* U.S. Army Engineer District, New Orleans, Louisiana.

U. S. Coast Guard
2000 Database of shipwrecks, hangs, obstructions, etc. in the Gulf of Mexico. Access format database with 6,491 entries. Chief of Aids to Navigation, Eight Coast Guard District, United States Coast Guard, New Orleans.

U.S. Geological Survey (USGS)
1892a *Dulac, Louisiana.* 15-minute quadrangle map at scale of 1:62,500. U.S. Geological Survey, Washington, D.C.

1892b *Houma, Louisiana.* 15-minute quadrangle map. Scale 1:62,500. U.S. Geological Survey, Washington, D.C.

1962 *Houma, Louisiana.* 7.5-minute quadrangle map. Scale 1:24,000. U.S. Geological Survey, Washington, D.C.

Veatch, Arthur C.
1899 The Five Islands. In *A Preliminary Report on the Geology of Louisiana*, by Gilbert D. Harris and A. C. Veatch, pp. 208-262. State Experiment Station, Louisiana State University and A. and M. College, Baton Rouge.

Walter, Glenn, Cinder Griffin Miller, Jeremy Pincoske, Roger Saucier, Susan Barrett Smith, and David D. Davis
1998 *Cultural Resources Survey of Bayou Dularge Disposal Areas, Terrebonne Parish, Louisiana.* R. Christopher Goodwin and Associates, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

The Waterways Journal
1962 Article on passage of a bond issue to raise funds for the Houma Navigation Canal. *The Waterways Journal.* 16 June 1962.

Watkins, Marguerite E.
1939 *History of Terrebonne Parish to 1861.* Unpublished Master's thesis, Department of History, Louisiana State University, Baton Rouge.

Way, Frederick, Jr.
1994 *Way's Packet Directory, 1848-1994.* Ohio University Press, Athens, Ohio.

Webb, Clarence H.
1977 *The Poverty Point Culture.* Geoscience and Man No. 17. School of Geoscience, Louisiana State University, Baton Rouge.

Webb, William S.
1946 *Indian Knoll, Site Oh 2, Ohio County, Kentucky.* Reports in Archeology and Anthropology No. 4(3). University of Kentucky, Lexington.

Weinstein, Richard A.
1974 *An Archaeological Survey of the Lower Amite River, Louisiana.* Unpublished Master's thesis, Department of Geography and Anthropology, Louisiana State University, Baton Rouge.

Houma Navigation Canal Deepening Project

1984 *Assessment of the Poverty Bayou Site (16 SMY 160), Belle Isle, St. Mary Parish, Louisiana.* Coastal Environments Inc. Submitted to Sun Exploration and Production Company, Lafayette.

1985a *Plaquemine in South Louisiana: A 1985 Summary.* Paper presented at the 11th annual meeting of the Louisiana Archaeological Society, Monroe.

1985b *Cultural Resources Survey of the Proposed Texas Gas Transmission Corporation 10-Inch Pipeline Route, Terrebonne Parish, Louisiana.* Coastal Environments, Inc. Submitted to T. Baker Smith and Son, Inc., Houma, Louisiana.

1986 Tchefuncte Occupation in the Lower Mississippi Delta and Adjacent Coastal Zone. In *The Tchula Period in the Mid-South and Lower Mississippi Valley: Proceedings of the 1982 Mid-South Archaeological Conference*, edited by David H. Dye and Ronald C. Brister, pp. 102-127. Archaeological Report No. 17. Mississippi Department of Archives and History, Jackson.

1987a *A Cultural Resources Survey of Portions of Two Proposed Pipeline Routes, Terrebonne Parish, Louisiana.* Coastal Environments, Inc. Submitted to C. H. Fenstermaker & Associates, Inc., New Orleans.

1987b Development and Regional Variation of Plaquemine Culture in South Louisiana. In *Emergent Mississippian: Proceedings of the Sixth Mid-South Archaeological Conference*, edited by Richard A. Marshall, pp. 85-106. Occasional Paper No. 87-01. Cobb Institute of Archaeology, Mississippi State University, Starkville.

1987c The Rosedale and Shellhill Discs: "Southern Cult" Evidence from Southeastern Louisiana. *Louisiana Archaeology* 11:65-88.

Weinstein, Richard A.

1994 *Cultural Resources Investigations Related to the West Belle Pass Headland Restoration Project, Lafourche Parish, Louisiana.* Coastal Environments, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Weinstein, Richard A., Eileen K. Burden, Katherine L. Brooks, and Sherwood M. Gagliano

1978 *Cultural Resource Survey of the Proposed Relocation Route of U.S. 90 (LA 3052), Assumption, St. Mary, and Terrebonne Parishes, Louisiana.* Coastal Environments, Inc. Submitted to Office of Highways, Louisiana Department of Transportation and Development. Copies available from Coastal Environments, Inc., Baton Rouge.

Weinstein, Richard A., Eileen K. Burden, and Sherwood M. Gagliano

1977 Archeological Phases—Coastal Louisiana. Paper presented at the 3rd annual meeting of the Louisiana Archaeological Society, New Orleans.

Weinstein, Richard A., and Sherwood M. Gagliano

1985 The Shifting Deltaic Coast of the Lafourche Country and its Prehistoric Settlement. In *The Lafourche Country: The People and the Land*, edited by Philip D. Uzee, pp. 122-149. Center for Louisiana Studies, University of Southwestern Louisiana, Lafayette.

Weinstein, Richard A., Wayne P. Glander, Sherwood M. Gagliano, Eileen K. Burden, and Kathleen G. McCloskey

1979a *Cultural Resources Survey of the Upper Steele Bayou Basin, West-Central Mississippi.* 3 vols. Coastal Environments, Inc. Submitted to Vicksburg District, U.S. Army Corps of Engineers. Copies available from Coastal Environments, Inc., Baton Rouge.

Weinstein, Richard A., and David B. Kelley

1984 *Archaeology and Paleogeography of the Upper Felsenthal Region: Cultural Resources Investigations in the Calion Navigation Pool, South-Central Arkansas.* Coastal Environments, Inc. Submitted to Vicksburg District, U.S. Army Corps of Engineers. Copies available from the Vicksburg District.

1992 *Cultural Resources Investigations in the Terrebonne Marsh, South-Central Louisi-*

ana. Coastal Environments, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers.

Weinstein, Richard A., and Philip G. Rivet
1978 *Beau Mire: A Late Tchula Period Site of the Tchefuncte Culture, Ascension Parish, Louisiana.* Anthropological Report No. 1. Louisiana Archaeological Survey and Antiquities Commission, Baton Rouge.

Weinstein, Richard A., Diane E. Wiseman, Laura A. Landry, and Wayne P. Glander
1979b *Environment and Settlement on the Southwestern Louisiana Prairies: A Cultural Resources Survey in the Bayou Mallet Watershed.* Coastal Environments, Inc. Submitted to Interagency Archeological Services, Atlanta. Copies available from Coastal Environments, Inc., Baton Rouge.

Whelan, James Patrick, Jr., and Charles E. Pearson
1999 *Archaeology of an Early Twentieth Century Black Community: The Good Land Cypress Sawmill Company, Terrebonne Parish, Louisiana.* Coastal Environments, Inc. Submitted to Office of Highways, Louisiana Department of Transportation and Development, Baton Rouge.

Wicker, Karen, Michele DeRouen, Douglas O'Connor, Elizabeth Roberts, and Jean Watson
1980 *Environmental Characterization of Terrebonne Parish: 1955-1978.* Coastal Environments, Inc. Submitted to Terrebonne Parish Police Jury. Copies available from Coastal Environments, Inc., Baton Rouge.

Willey, Gordon R., and Philip Phillips
1958 *Method and Theory in American Archaeology.* University of Chicago Press, Chicago.

Williams, J. J.
1842 Journal of a Portion of the Survey of the Military Approaches to New Orleans, West of the Mississippi: Kept under the Direction of Captain George W. Hughes. Ms. on file, Record Group 77, U.S. National Archives, Washington, D.C.

Williams, Luis M., Jr., Cinder Griffin Miller, Roger Saucier, Sean Faulkner, Ralph Draughon, Jr., Jeremy Pincoske, Charlene Keck, and Dave D. Davis.
1998 *Phase I Cultural Resources Survey and Inventory of the Proposed Discovery Gas Transmission LLC 20 in O.D. Residue Pipeline Project, Lafourche Parish, Louisiana.* R. Christopher Goodwin and Associates, Inc. Submitted to Discovery Gas Transmission LLC, St. Rose, Louisiana.

Williams, Stephen, and Jeffrey P. Brain
1983 *Excavations at Lake George, Yazoo County, Mississippi, 1958-1960.* Paper No. 74. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Williams, S. Jefferies, Shea Penland, and Asbury H. Sallenger, Jr. (editors)
1992 *Atlas of Shoreline Changes in Louisiana from 1853 to 1989.* Prepared by the U.S. Geological Survey in cooperation with the Louisiana Geological Survey. Department of the Interior, Geological Survey, Reston, Virginia.

Wiseman, Diane E., Richard A. Weinstein, and Kathleen G. McCloskey
1979 *Cultural Resources Survey of the Mississippi River-Gulf Outlet, Orleans and St. Bernard Parishes, Louisiana.* Coastal Environments, Inc. Submitted to New Orleans District, U.S. Army Corps of Engineers. Copies available from Coastal Environments, Inc., Baton Rouge.

Wood, W. Raymond, and R. Bruce McMillan (editors)
1976 *Prehistoric Man and His Environments: A Case Study in the Ozark Highlands.* Academic Press, New York.

Woodiel, Deborah K.
1980 *St. Gabriel: Prehistoric Life on the Mississippi.* Unpublished Master's thesis, Department of Geography and Anthropology, Louisiana State University, Baton Rouge.

Work Projects Administration (WPA)
1938 *Wreck Report: A Record of Casualties to Persons and Vessels on the Mississippi river, its Tributaries on Lakes and Water-*

Houma Navigation Canal Deepening Project

ways of the U.S. Customs District Port of New Orleans, 1873-1924. Prepared by the Survey of Federal Archives in Louisiana, Service Division, Work Projects Administration. On file at Hill Memorial Library, Louisiana State University, Baton Rouge.

1941 *Louisiana: A Guide to the State.* Hastings House, New York.

Work Projects Administration (WPA)

1942 *Ship Registers and Enrollments of New Orleans, Louisiana.* vols. 1-6. Prepared by the Survey of Federal Archives in Louisiana, Service Division, Work Projects Administration. On file at Hill Memorial Library, Louisiana State University, Baton Rouge.

Wurzlow, Helen Emmeline

1985 *I Dug Up Houma Terrebonne.* 7 Volumes. Published by Helen Emmeline Wurzlow, Houma, Louisiana.

APPENDIX:

**PLATES OF PROJECT PLANS FOR THE
HOUma NAVIGATION CANAL DEEPENING
PROJECT**



HOUMA NAVIGATION CHANNEL
RECONSTRUCTION PROJECT



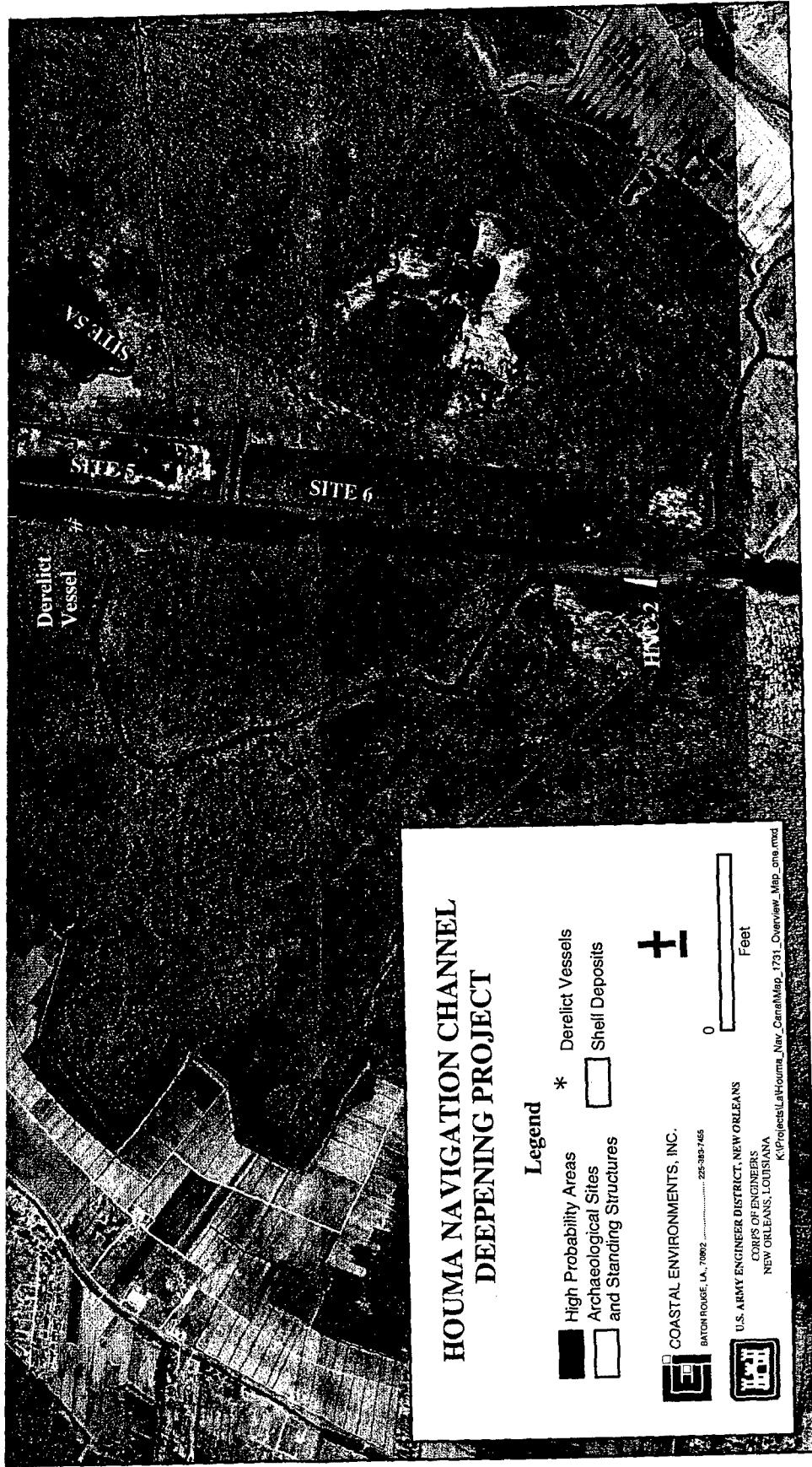
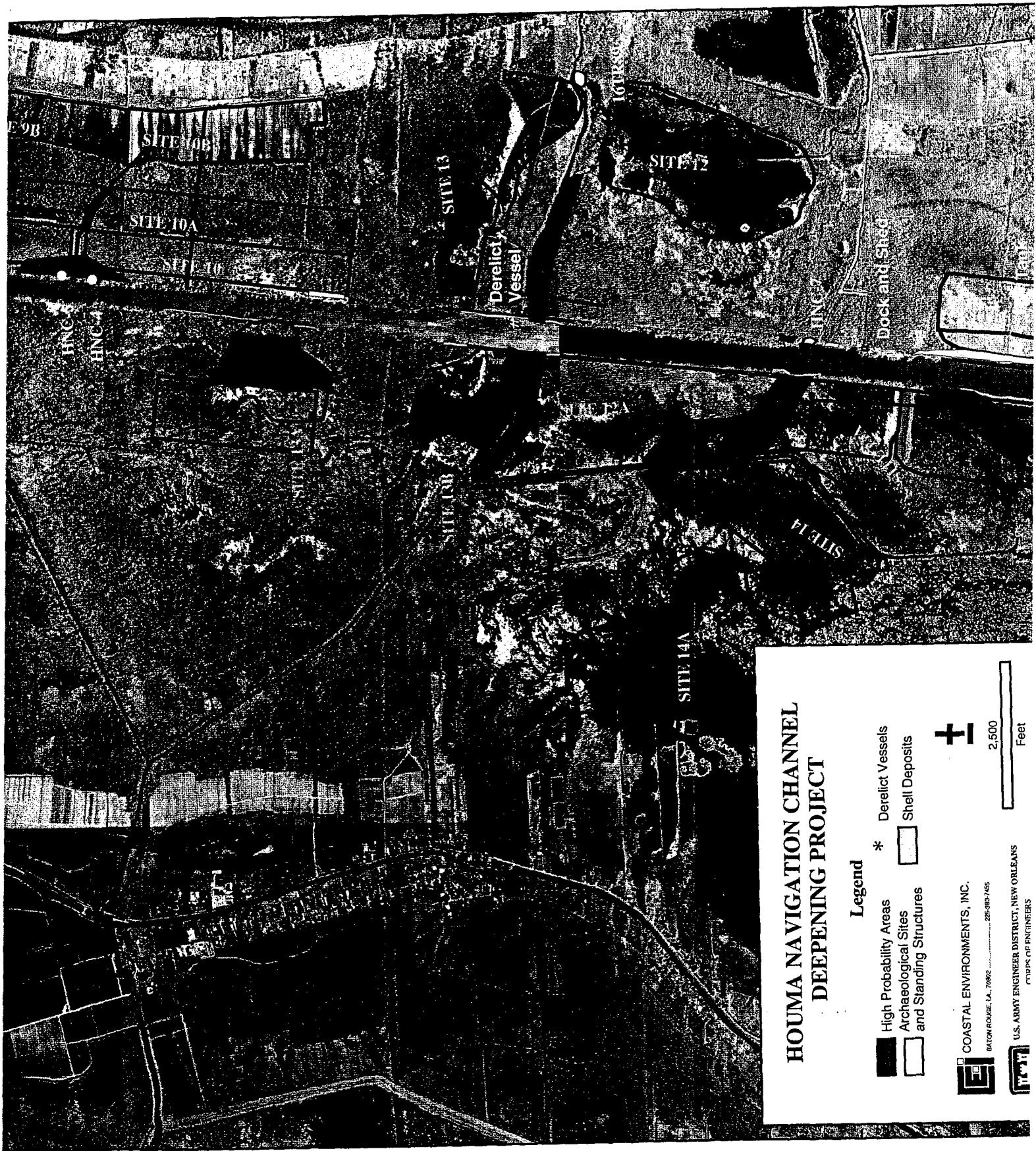


Plate 1 of 5. Project plans for Houma Navigation Canal Deepening Project showing known cultural resources and high probability areas.





**HOUMA NAVIGATION CHANNEL
DEEPENING PROJECT**

2

HOUMA NAVIGATION CHANNEL DEEPENING PROJECT

Legend

- High Probability Areas
- Archaeological Sites
- and Standing Structures
- * Derelict Vessels
- Shell Deposits

 COASTAL ENVIRONMENTS, INC.
BATON ROUGE, LA. 70802 225-343-7455

 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

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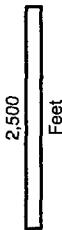
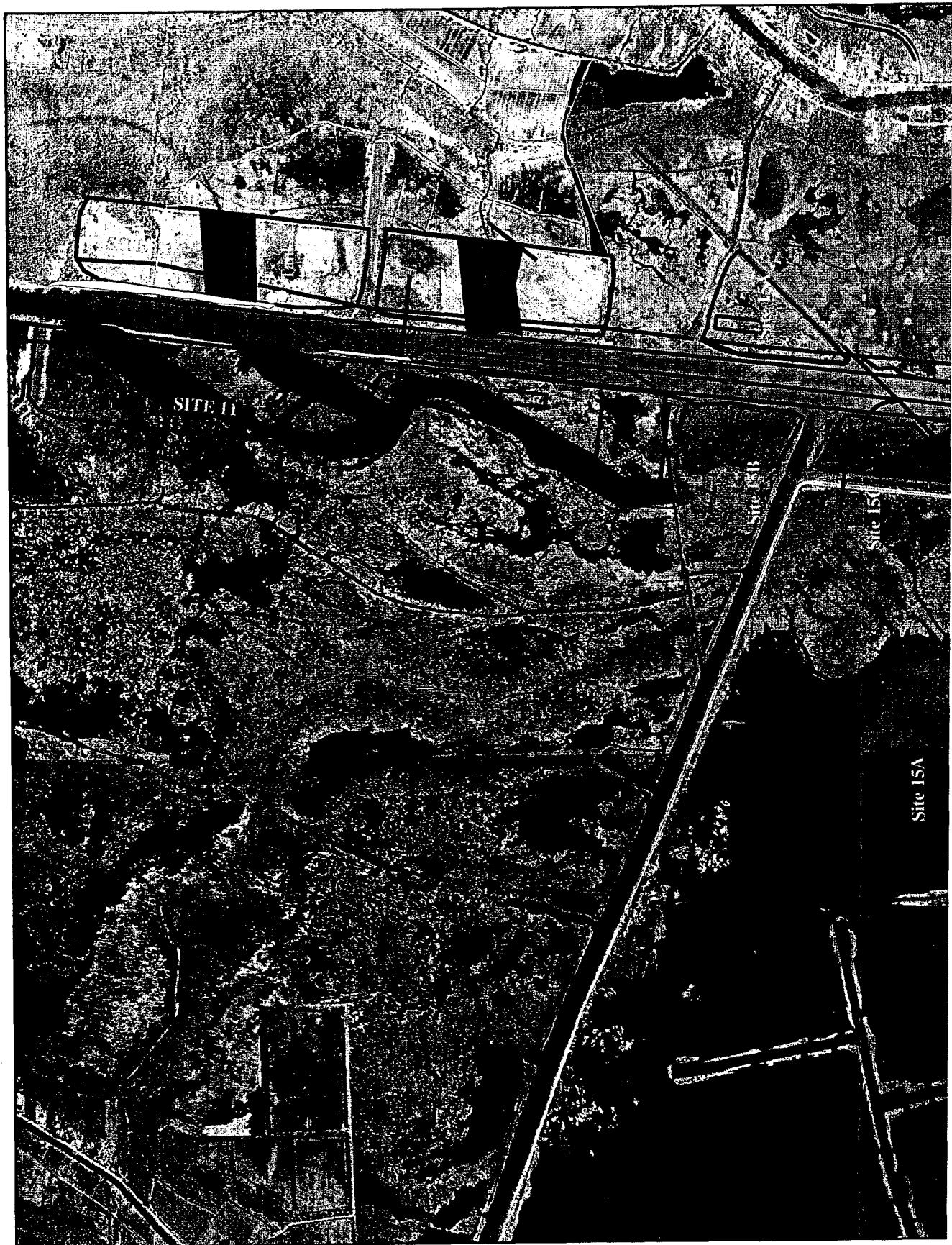
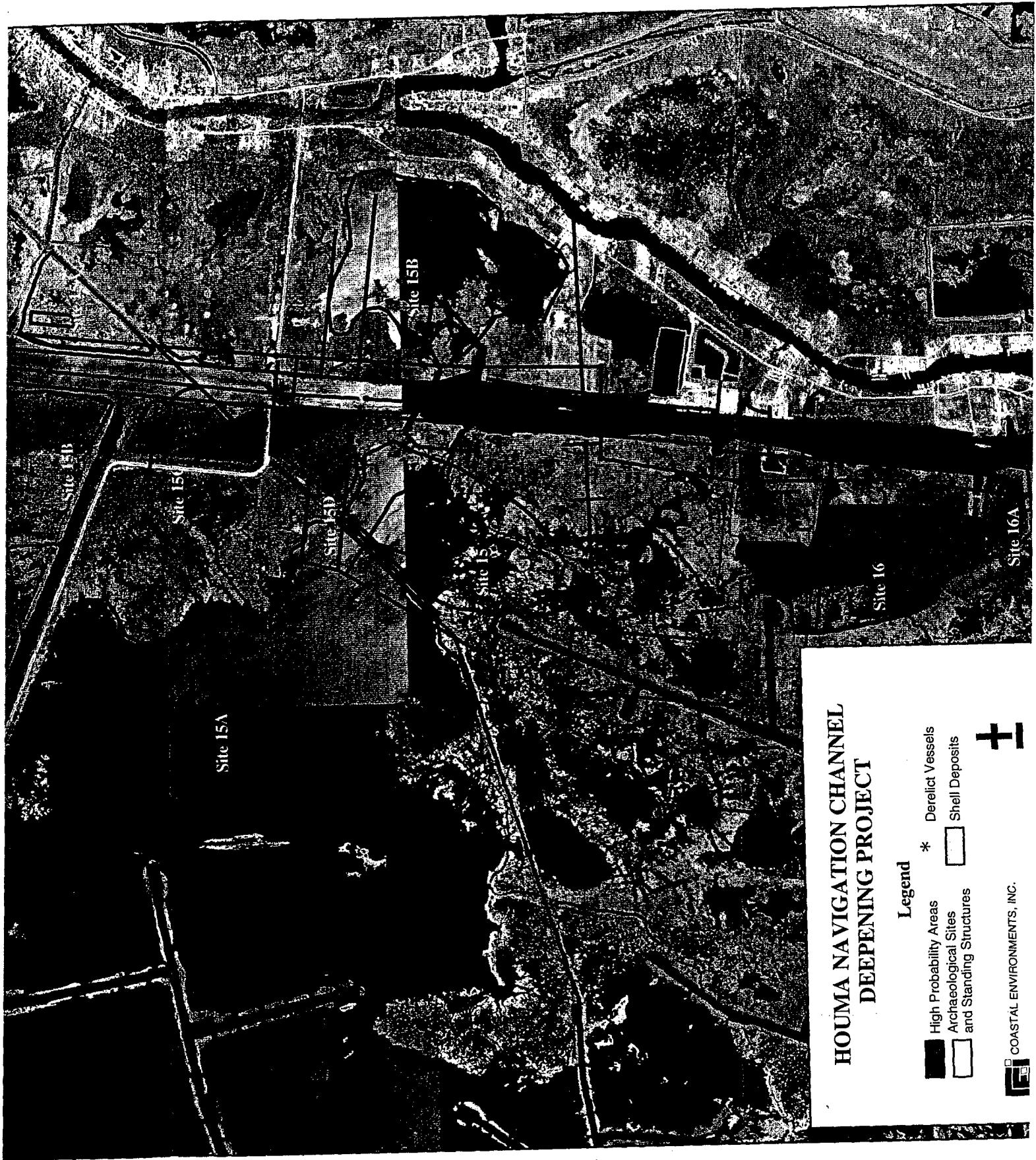


Plate 2 of 5. Project plans for Houma Navigation Canal Deepening Project showing known cultural resources and high probability areas.





**HOUMA NAVIGATION CHANNEL
DEEPENING PROJECT**

COASTAL ENVIRONMENTS, INC.

HOUUMA NAVIGATION CHANNEL DEEPENING PROJECT

Legend

- High Probability Areas
- * Derelict Vessels
- Archaeological Sites
- and Standing Structures
- Shell Deposits



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2,500
Feet

Site 17

Site 16

161 RST

Site 16A

Plate 3 of 5. Project plans for Houma Navigation Canal Deepening Project showing known cultural resources and high probability areas.

63



**HOUMA NAVIGATION CHANNEL
DEEPENING PROJECT**

Legend

- High Probability Areas
- * Derelict Vessel
- Archaeological Sites
- Shell Deposits
- and Standiron Structures



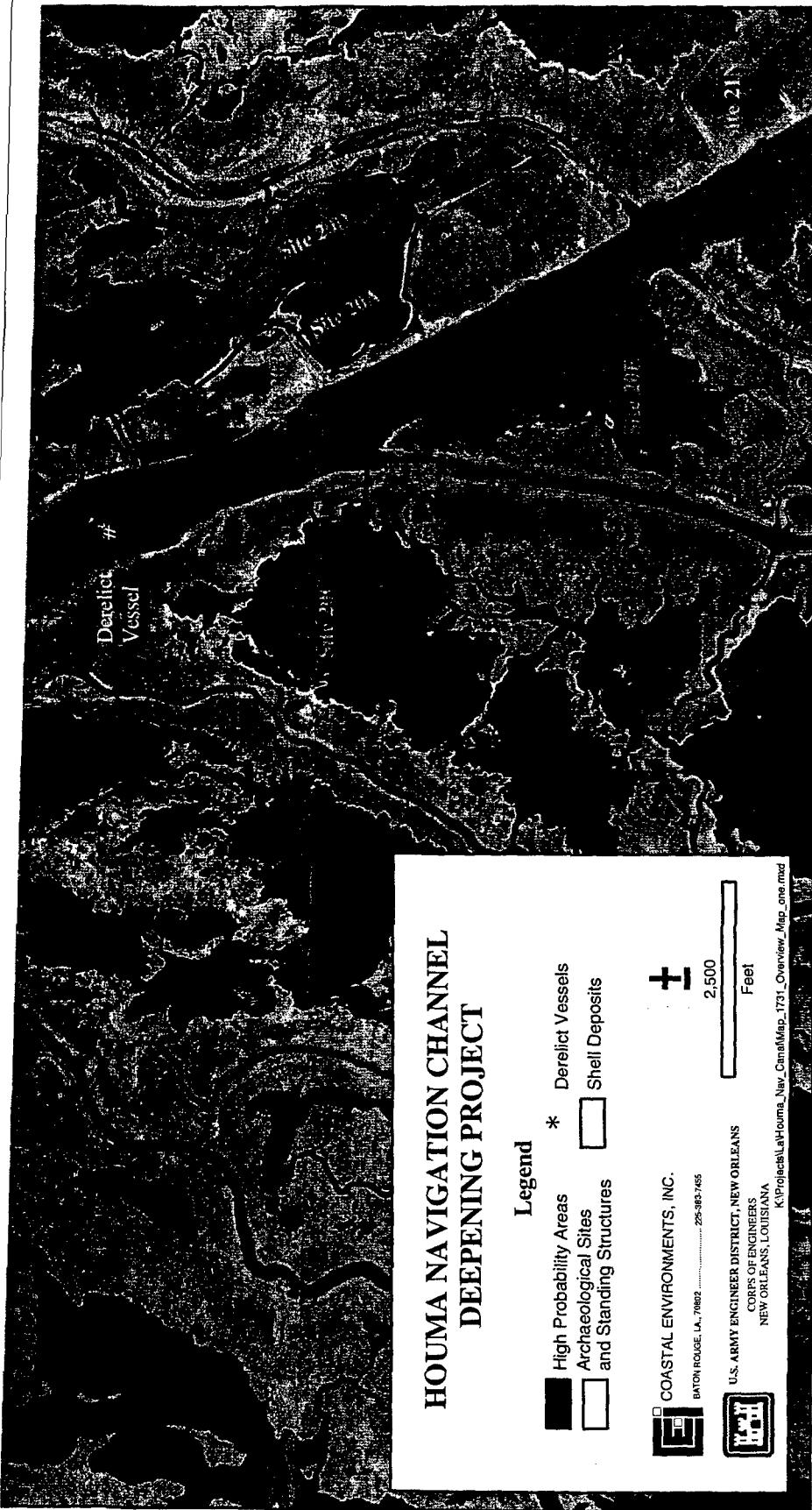
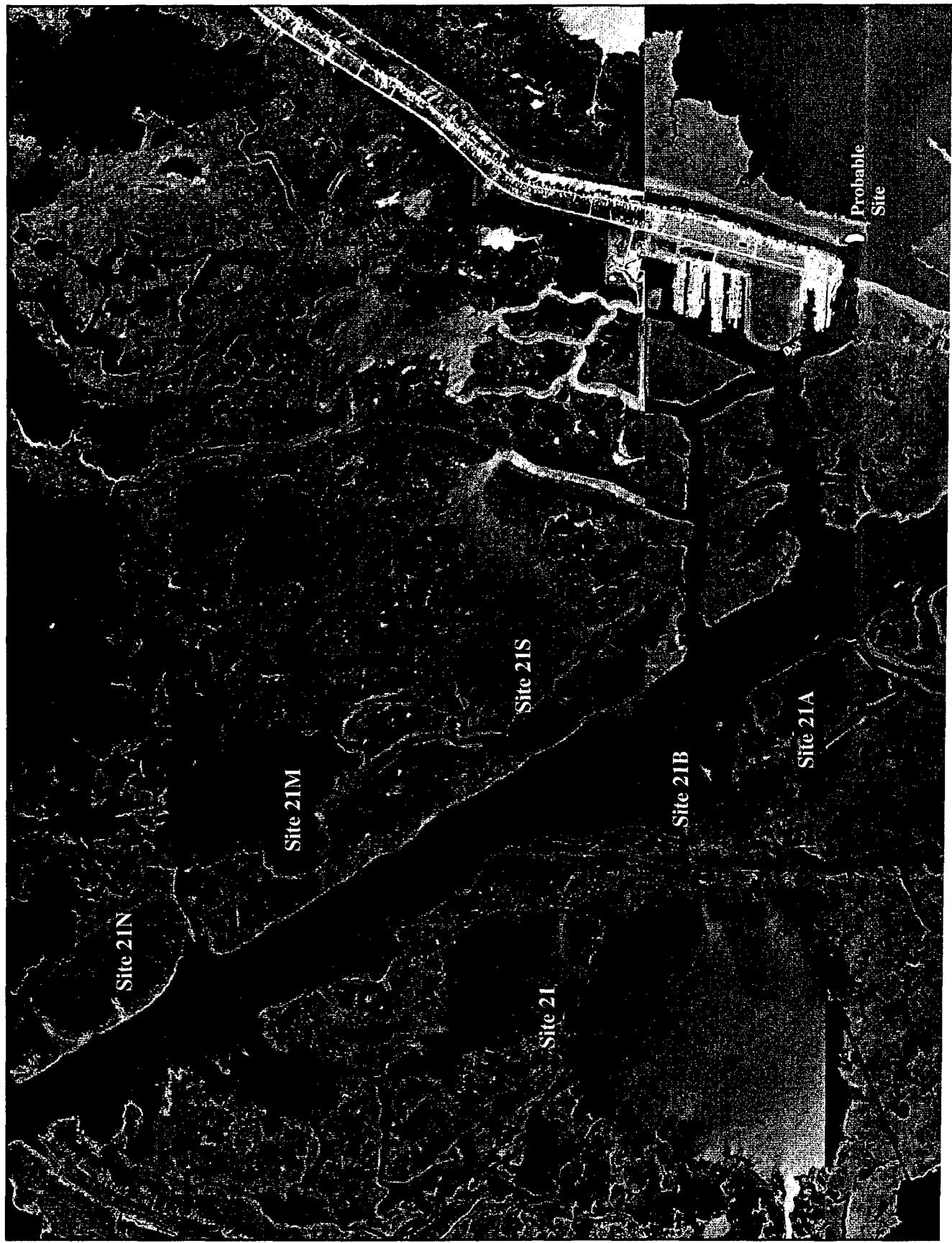


Plate 4 of 5. Project plans for Houma Navigation Canal Deepening Project showing known cultural resources and high probability areas.



Site 21B

Site 21A

Probable
Site

16TR15

16TR18

Site 24

16TR12

Site 23

16TR14

16TR13

Site 24A

HOUMA NAVIGATION CHANNEL DEEPENING PROJECT

Legend

- High Probability Areas
- * Derelict Vessels
- Archaeological Sites
and Charred Structures
- Shell Deposits

2

Site 24A

HOUUMA NAVIGATION CHANNEL DEEPENING PROJECT

Legend

- High Probability Areas
- * Derelict Vessels
- Archaeological Sites
- Shell Deposits
- and Standing Structures



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± 2,500

Feet



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Plate 5 of 5. Project plans for Houma Navigation Canal Deepening Project showing known cultural resources and high probability areas.